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§ 5:23-8.1 Title; scope; intent

- (a) This part of the regulations, adopted pursuant to P.L. 1975, c.217, the Uniform Construction Code Act (*N.J.S.A. 52:27D-119* et seq.) and entitled Asbestos Hazard Abatement Subcode shall be known and may be cited throughout the regulations as *N.J.A.C. 5:23-8* and when referred to in this subchapter, may be cited as "this subchapter."
- 1. In addition, the New Jersey Departments of Health and Labor have jointly adopted regulations pursuant to P.L. 1984, c.217, the Asbestos Control and Licensing Act (*N.J.S.A. 34:5A-32* et seq.) and are cited as *N.J.A.C. 8:60*, and *N.J.A.C. 12:120*, respectively. These regulations provide for: a standardized training course for all asbestos workers; licensing of asbestos abatement contractors; and issuing asbestos worker performance permits for asbestos abatement workers.
- i. Copies of *N.J.A.C.* 12:120 may be obtained from the New Jersey Department of Labor, Division of Workplace Standards, Asbestos Control and Licensing, PO Box 054, Trenton, New Jersey 08625-0054. These rules provide that any asbestos abatement project, excluding an operations and maintenance activity, must be conducted by a licensed contractor pursuant to the referenced rules, including projects involving buildings and structures which are not within the scope of this subchapter.
- 2. The New Jersey Department of Environmental Protection has authority to enforce regulations regarding the transport and disposal of asbestos-containing materials pursuant to *N.J.S.A.* 13:1D-9 and 13:1E-1 et seq. These rules are cited as *N.J.A.C.* 7:26.
- i. Copies of *N.J.A.C. 7:26* may be obtained from the New Jersey Department of Environmental Protection, Division of Solid Waste Management, 840 Bear Tavern Road, PO Box 414, Trenton, New Jersey 08625-0414.
- 3. All samples collected and submitted for analysis for asbestos pursuant to this subchapter shall be analyzed for asbestos in accordance with *N.J.A.C. 5:23-8.21*.
- (b) Unless otherwise specifically provided, all references to article or section numbers or to provisions not specifically identified by number, shall be construed to refer to such article, section or provision of this subchapter.
- (c) This subchapter, which pertains to educational facilities and public buildings as defined in *N.J.A.C. 5:23-8.2*, shall control matters relating to: construction permits for asbestos abatement; fees; licenses; certification; work permits; reports required; documentation; inspections by the asbestos safety technician; air monitoring; enforcement responsibilities; and remedies and enforcement. This subchapter controls the abatement of asbestos from a building. A construction permit for renovation or demolition shall be required pursuant to N.J.A.C. 5:23-2 for any other work performed subsequent to the asbestos abatement project.

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- 1. Any private building that houses a day care center, nursery or educational facility shall be subject to this subchapter when an asbestos hazard abatement project takes place within the building or any part of the building regardless of the remoteness of the facility or its size relative to the building. An asbestos hazard abatement project shall have a construction permit from the enforcing agency.
- 2. All common areas in a building, or part thereof, leased by a public entity, such as, but not limited to, building entrances and lobbies, rest rooms, cafeterias, hallways, stairwells, and elevators where public employees may normally traverse and all areas with mechanical equipment that serve the areas occupied by the public employees, shall be subject to this subchapter when an asbestos hazard abatement project takes place within the building or any part of the building.
- 3. This subchapter shall apply to exterior portions of buildings, such as: exterior hallways connecting buildings; porticos; mechanical system insulation; cooling towers; and steam or other service tunnels serving or connecting buildings. These exterior spaces are to be considered, for the purposes of obtaining a construction permit pursuant to this subchapter, a single homogeneous area for purposes of abatement project design.
- 4. Projects involving the removal of non-friable, miscellaneous asbestos-containing material from interior spaces shall be subject to this subchapter where the method chosen to remove the non-friable material may cause the building environment to become contaminated with airborne asbestos fibers. Removal shall be in accordance with *N.J.A.C.* 5:23-8.20.
- (d) Until further action is taken, this subchapter remains advisory for all other buildings and structures in the State.
- (e) This subchapter seeks to provide and ensure public safety, health, and welfare insofar as they are affected by asbestos and asbestos-containing materials. It is not intended to, nor shall it be construed to, conflict with or impede the operation of the asbestos work standards issued by the Occupational Safety and Health Administration, 29 CFR Section 1910.1001 et seq., 29 CFR Section 1926.58 and N.J.A.C. 12:100-12, the Asbestos Subchapter of the New Jersey Safety and Health Standards for Public Employees. The purpose of this subchapter is to assure that work is performed in a safe manner as a pre-condition to the issuance of a certificate of occupancy.
- 1. It is the purpose of this subchapter to establish standards and procedures to ensure that all State laws and regulations applicable to asbestos hazard abatement work are actually adhered to wherever work takes place.
- 2. Asbestos has been a pervasive construction material which in many of its forms poses no significant health risk. These standards and procedures need not be applied to all work involving asbestos-containing materials but only those which pose serious health hazards to the public.

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3. Asbestos that is, or that can readily become, friable was a widely used construction material. Its removal, replacement, repair, enclosure or encapsulation shall be considered construction work and shall therefore require a construction permit issued pursuant to the State Uniform Construction Code Act (*N.J.S.A. 52:27D-119* et seq.). Asbestos and asbestos-containing materials were, in many cases, used in order to satisfy important code requirements pertaining to fire safety. Accordingly, where asbestos was used originally to satisfy fire code requirements, it shall not be removed unless it is replaced, as part of the project, with material or assembly which has equivalent fire resistive or heat resistive characteristics. Additionally, any encapsulation materials or methods shall conform to the construction requirements of the Uniform Construction Code.

§ 5:23-8.2 Definitions

The following words, terms and abbreviations when used in this subchapter shall have the following meanings unless the context clearly indicates otherwise.

"Airlock" means a serial arrangement of rooms whose doors are spaced a minimum of four feet apart so as to permit ingress or egress through one room without interfering with the next and constructed in such a manner as to prevent or restrict the free flow of air in either direction.

"Air pressure differential" means air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

"Amended water" means water to which a surfactant has been added.

"Asbestos" means a general term used to describe a group of naturally occurring hydrated mineral silicates. The asbestiform varieties include chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite-grunerite); anthophyllite; tremolite and actinolite.

"Asbestos-containing material" means any material which contains more than one percent asbestos by weight.

"Asbestos hazard abatement project" means the removal, enclosure, or encapsulation of more than 25 square feet of asbestos-containing material used on any equipment or surface area such as wall, or ceiling area; or the removal or encapsulation of more than 10 linear feet of asbestos-containing material on covered piping.

"Asbestos Safety Control Monitor" means a business entity authorized pursuant to *N.J.A.C.* 5:23-8 to ensure compliance with the Asbestos Hazard Abatement Subcode.

"Asbestos Safety Technician" means a person certified by the New Jersey Department of Community Affairs, hired by the asbestos safety control monitor who

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continuously monitors and inspects the asbestos abatement work pursuant to this subchapter. This person shall be required to be on the job site during the time the asbestos abatement work is taking place and perform all duties and responsibilities established by these regulations.

"Authorized personnel" means the owner, the owner's representative, asbestos abatement contractor personnel, asbestos safety control monitor personnel, emergency personnel, or a representative of any Federal, state, or local regulatory agency or other personnel under contract for or having jurisdiction over the project.

"Certificate of Completion" shall mean the certificate issued by the asbestos safety control monitor signifying that the asbestos hazard abatement work has been completed in conformance with *N.J.A.C.* 5:23-8.

"Construction permit for asbestos abatement" means required official approval to commence any asbestos hazard abatement project. This permit is issued by the enforcing agency.

"Contractor" means the Asbestos Removal Contractor licensed by the New Jersey Department of Labor.

"County facility" means all buildings and structures, or parts thereof, which are under the ownership or control of a county. This includes, but is not limited to, administration offices, court houses, sheriff offices, welfare offices, maintenance facilities and garages.

"Critical barrier" means two layers of nominal six mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to the surrounding area, such as the opening between the top of a wall and the underside of ceiling construction, electrical outlets, nonremovable lights, HVAC systems, windows, doorways, entranceways, ducts, grilles, grates, diffusers, wall clocks, speaker grilles, floor drains, sink drains, etc.

"Decontamination unit" means serial arrangement of rooms or spaces for the purpose of separating the work area from the building environment upon entering the work area and for the cleaning of persons, equipment, and contained waste prior to returning to the clean environment.

"Demolition" means the actual destruction and removal of a building, or part of a building, without intent to renovate, repair, or replace.

"Educational facility" means all buildings and structures, or parts thereof, (both public and private) which are under the ownership or control of an educational institution and which are used for student residences, educational purposes or learning experiences, dining facilities, libraries, or support facilities. Educational institutions include schools, colleges, universities, academies, child day care centers and nurseries.

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"Employee" means an asbestos abatement worker having a valid work permit, issued by the New Jersey Department of Labor and employed by the contractor.

"Encapsulation" means the treatment of asbestos-containing materials with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

"Enclosure" means the construction of an airtight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

"Engineering controls" means all methods used to maintain low fiber counts in work areas and occupied spaces, including, but not limited to, air management, barriers to ensure public safety, and methods to confine airborne asbestos fibers to the work area.

"EPA" means the United States Environmental Protection Agency.

"Flame-resistant polyethylene sheet" means a single polyethylene film in the largest sheet size possible to minimize seams, nominal six mil thick, conforming to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.

"Friable" means any material applied to ceilings, walls, piping, duct work, etc., which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure.

"Glove bag" means a polyethylene bag or other techniques or work practices approved by Department especially designed to enclose sections of equipment for the purpose of removing asbestos-containing material without releasing fibers into the air.

"Glovebag work area enclosure" means the enclosure that defines the work area for glovebag activity.

"HEPA" means High Efficiency Particulate Air filter, capable of filter efficiency of 99.97 percent down to 0.3 um (microns).

"Local education agency" means any local educational agency as defined in Section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 3381); the owner of any nonpublic, nonprofit elementary, or secondary school building; or the governing authority of any school operated under the defense dependents' education system provided for under the Defense Dependents' Education Act of 1978 (20 U.S.C. 921 et seq.).

"Miscellaneous asbestos-containing material" means interior building material on structural components, structural members or fixtures such as vinyl asbestos flooring, ceiling tiles, transite and asbestos cement board, and fire-resistant gaskets and seals but does not include surfacing material or thermal system insulation.

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"Municipal facility" means all buildings and structures, or parts thereof, which are under the ownership or control of a municipality. This includes, but is not limited to, city halls, police stations, fire houses, welfare offices, maintenance facilities, and garages.

"NESHAP" means the National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

"NIOSH" means the National Institute for Occupational Safety and Health.

"Non-friable" means material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

"Occupied building" means a building or structure where occupancy is permitted in certain areas outside of the required containment during an asbestos hazard abatement project.

"Operations and maintenance activity" means corrective action not intended as asbestos abatement. The amount of friable asbestos-containing material that can be abated per year per project is 25 square feet or less or, if on covered piping, 10 linear feet or less.

"PCM" means Phase Contrast Microscopy.

"Polyethylene sheet" means a single nominal six mil thick polyethylene film.

"Privately owned buildings containing educational facilities" means all buildings and structures, or parts thereof, which are under the ownership or control of private parties, and which are used for educational purposes or learning experiences. Educational facilities include child day care centers, nurseries, laboratories, and schools.

"Public building" means any building or structure or part thereof, owned, leased or managed by the State or any of its departments, divisions, bureaus, boards, councils, authorities, or other agencies; or by any county, municipality, or any agency or instrumentality thereof.

"Removal" means the taking out or the stripping of asbestos-containing material from a building or structure.

"Repair" means returning damaged asbestos-containing material to an undamaged condition or to an intact state using recommended work practices so as to prevent the likelihood of fiber release.

"Sealant" means a liquid or solution to be used as a binding agent, such as a diluted encapsulant or a water based paint, on dried exposed surfaces from which asbestos containing material has been removed. The color of the coat shall be separate and distinct from the underlying substrate.

"Separation barrier" means a wall constructed to isolate the clean area from the work area and to support the polyethylene sheets.

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"State facility" means all buildings and structures, or parts thereof, which are owned, managed or leased by the State of New Jersey.

"Strippable coating" means a water-based latex material, which is either available in aerosol cans or pre-mixed for spray application, formulated to adhere to surfaces and to be removed cleanly by peeling off at the completion of the abatement project.

"Surfacing asbestos-containing material" means material in a building that is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing or other purposes.

"TEM" means Transmission Electron Microscopy.

"Thermal system insulation" means material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

"um" means microns, or micrometers.

"Water column (w.c.)" means a unit of measurement for pressure differential.

"Wet cleaning" means the process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or a removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos contaminated waste.

"Work area" means the area where asbestos related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel.

§ 5:23-8.3 Enforcement; licensing; special technical services

- (a) Except as is otherwise provided in (b)1 below, the provisions of this subchapter shall be enforced by municipal enforcing agencies utilizing asbestos safety control monitors or by the New Jersey Department of Community Affairs, hereafter cited as the Department, if applicable, and shall be administered and enforced uniformly throughout the State. This subchapter shall be in addition to existing regulations already adopted pursuant to the Uniform Construction Code Act (P.L.1975, c.217 as amended) and known as the Regulations for the Uniform Construction Code (*N.J.A.C. 5:23*). This subchapter contains administrative procedures for the inspection of asbestos abatement work involving removal, encapsulation, enclosure, repair, renovation, or demolition work which disturbs asbestos.
 - 1. Rules concerning exceptions are as follows:

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- i. State-owned, State-managed or State-leased buildings: The Department utilizing asbestos safety control monitors shall be the sole enforcing agency to administer and enforce the Asbestos Hazard Abatement Subcode with respect to State-owned, State-leased or State-managed buildings.
- (b) The joint regulations adopted by the New Jersey Departments of Health and Labor, which are cited as *N.J.A.C. 8:60* and *N.J.A.C. 12:120*, respectively, provide the licensing requirements of contractors who perform any of the functions of application, enclosure, removal or encapsulation.
 - 1. Rules concerning licenses are as follows:
 - i. A licensed contractor shall be required for an asbestos hazard abatement project.
- ii. A licensed contractor shall not be required for an operations and maintenance activity.
- 2. Nothing herein shall be construed as limiting the ability of the Department of Labor to cite contractors for violations of the provisions of this subchapter.
- (c) Whenever the Asbestos Safety Control Monitor determines that the need for interpretations and/or assistance exists with regard to a particular project, the asbestos safety control monitor shall contact the department who shall make such determination deemed necessary. Such may include, but not be limited to:
 - 1. Plan and specification services;
 - 2. Site investigation;
 - 3. Site inspections.

§ 5:23-8.4 Variations

- (a) No variations from the requirements of this subchapter shall be made except upon written approval from the Department. The application for a variation shall be filed by the owner or the agent of the owner and forwarded to the Department with the recommendation of the asbestos safety control monitor. Any variation shall be consistent with N.J.A.C. 5:23-2 and the intent of this subchapter.
- (b) An application for a variation pursuant to this section shall be filed in writing with the Department and shall include specifically:
- 1. A statement of the requirements of this subchapter from which a variation is sought;
- 2. A statement of the manner by which strict compliance with said provisions would result in practical difficulties;

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- 3. A statement of the nature and extent of such practical difficulties;
- 4. A statement of feasible alternatives to the requirements of this subchapter which would adequately protect the health, safety and welfare of the occupants or intended occupants and the public generally and which would adequately prevent contamination of the environment. Plans describing any relevant aspects of the variation requested, as pertaining to the layout of the work area, work procedures, exit requirements, or safety, shall be submitted with the statement of feasibility; and
 - 5. The appropriate fee.
- (c) The fee for an application for a variation from this subchapter shall be \$ 560.00 and shall be paid by check or money order payable to the "Treasurer, State of New Jersey."
 - (d) The validity of an approved variation shall be determined as follows:
- 1. Any approved variation shall become invalid if the authorized work is not commenced within 12 months after the approval of the variation, or if the authorized work is suspended or abandoned for a period of 12 months after the time of commencing the work.

§ 5:23-8.5 Construction permit for asbestos abatement

- (a) It shall be unlawful to undertake an asbestos hazard abatement project unless the owner of the facility, or an authorized representative on behalf of the owner, first files an application in writing with the enforcing agency and obtains the required permit. This permit shall serve as notice for public record in the office of the enforcing agency. All work shall be monitored and controlled by the asbestos safety control monitor who will advise the enforcing agency of its findings.
- 1. The enclosure of any amount of asbestos-containing material used to cover pipes shall not require a permit for asbestos abatement pursuant to this subchapter, but it may be considered construction work.
- 2. A construction permit shall be obtained when required by the enforcing agency pursuant to N.J.A.C. 5:23-2.
- (b) All asbestos abatement work shall be conducted in unoccupied buildings, unless a written statement signed by the asbestos safety control monitor denoting portions of the building that may be occupied is filed as required by *N.J.A.C.* 5:23-8.19(c)8.
- 1. The asbestos safety control monitor shall not be required to file such a written statement denoting the occupancy of the building by maintenance personnel who are properly trained and/or security personnel essential to the building operation.

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- 2. The asbestos safety control monitor shall not be required to file such written statement denoting occupied portions of the building for a cleared area in a multi-phase project that has received a Temporary Certificate of Occupancy from the enforcing agency when such occupancy applies to contractors or related personnel involved with post-abatement activity.
- (c) The Department or a municipality utilizing an asbestos safety control monitor which has been authorized by the Department to enforce the Asbestos Hazard Abatement Subcode within its jurisdiction shall be the sole enforcing agency for asbestos hazard abatement work.
- (d) The application for a construction permit for asbestos abatement shall be subject to the following:
- 1. The application for a permit shall be submitted in such form as the department may prescribe and shall be accompanied by the required fee as provided for in this subchapter.
- 2. The application for a construction permit for asbestos abatement shall be required to include the following:
- i. The name, address and license number of the asbestos contractor pursuant to *N.J.A.C. 12:120* Asbestos Licenses and Permits under the jurisdiction of the New Jersey Department of Labor;
- ii. The asbestos hazard assessment, which shall be prepared by the New Jersey Department of Health, or by a county or local department of health or a private individual who has received accreditation as an inspector under the United States Environmental Protection Agency's Model Accreditation Program as referenced in 40 CFR 763. The accreditation will be issued by an EPA-approved training agency, and that accreditation will include the place of training, accreditation number and expiration date. Accreditations are issued for one year. This assessment shall be required unless the requirement for an assessment has been waived in writing by the New Jersey Department of Health;
- iii. The name and address of the private air monitoring firm, hired by the building owner, who shall act as the asbestos safety control monitor authorized by the New Jersey Department of Community Affairs and shall be responsible for continuously monitoring the asbestos abatement project;
- iv. Four sets of plans and specifications indicating: the scope of the proposed work; type and percentage of the asbestos; the total amount of square and/or linear footage of asbestos-containing material to be abated; the provisions proposed to contain the asbestos-containing material during abatement work including, but not limited to, separation barriers, critical barriers, and the route of travel for removing asbestos waste from the work area; a copy of the site plan; and a floor plan indicating exits. The

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approved plans and specifications shall be distributed as follows: one set each to the construction official, asbestos safety control monitor, building owner, and project site;

- v. Documentation that all buildings will be unoccupied at the time an asbestos abatement project takes place, except as approved by the asbestos safety control monitor as delineated in *N.J.A.C.* 5:23-8.19;
- vi. The name and address of the New Jersey Department of Environmental Protection and Energy registered waste hauler and of the New Jersey Department of Environmental Protection and Energy registered landfill where asbestos waste will be deposited;
 - vii. The scheduled starting and completion dates for the asbestos abatement project;
- viii. The method of air analysis used pursuant to *N.J.A.C.* 5:23-8.21 for determining the final clearance level in order to reoccupy the building.
- 3. It shall be the responsibility of the owner or his agent to file with the enforcing agency, in the event of any change in (d)2i, iii and vi above. Such change shall be filed as an amendment to the application and shall be forwarded to the Department as set forth in (h) below. The replacement firm shall assume all responsibilities for the asbestos abatement work to continue, while the preceding firm still bears responsibility for its action.
- (e) The issuance of a construction permit for asbestos abatement shall be subject to the following:
 - 1. Submission of a completed application;
- 2. The described work and containment measures shall conform to the requirements of this subchapter and the requirements of any other applicable law or rule adopted or enforced by any other State agency;
- 3. A written release of the plans and specifications by the asbestos safety control monitor.
- 4. Cursory plan review shall be done by the enforcing agency to determine the need of replacement material for maintaining the structural integrity of a building; if required, a separate construction permit shall be issued by the enforcing agency. In addition, a review shall be done to ensure that means of egress are maintained in occupied buildings.
- (f) The issuance of the construction permit for asbestos abatement authorizes preparation of the work area. This initial preparation of the work area shall be observed by the asbestos safety technician to ensure compliance with this subchapter. No actual asbestos abatement work shall commence until a pre-commencement inspection has been conducted and approved by the asbestos safety technician.

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- (g) A permit, once issued, shall remain valid only as long as all of the information contained in the application remains correct and is adhered to. Any change shall require an amendment to the application before the change takes place. Failure to adhere to these requirements may result in a stop work order.
- (h) The owner or his or her agent shall notify the Department in writing within three business days of the issuance of the construction permit for asbestos abatement, if the enforcing agency is a municipal enforcing agency and not the Department. Such notice shall be supplied in the form of a copy of the completed application for a construction permit for asbestos abatement and a copy of the permit.
 - 1. Notification shall be sent to:

New Jersey Department of Community Affairs Bureau of Code Services Asbestos Safety Unit CN 816 Trenton, New Jersey 08625-0816

- (i) The owner or his or her agent shall notify the following in writing as required in NESHAPS (40 CFR Part 61, Subpart M):
 - 1. Notification shall be sent to:
 - i. U.S. Environmental Protection Agency Region II NESHAP26 Federal Plaza, Room 1033 New York, New York 10278; and
 - ii. New Jersey Department of Community Affairs Bureau of Code Services Asbestos Safety Unit CN 816 Trenton, New Jersey 08625-0816

§ 5:23-8.6 Coordination with other permits

- (a) When a building owner or an authorized representative on behalf of the owner submits an application for a construction permit for repair, renovation, or demolition work, the following information shall be required to be given to the construction official having jurisdiction before a construction permit is issued:
- 1. An architect/engineer certification concerning whether asbestos will be disturbed and to what extent it will be disturbed during the planned construction work.

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- i. Where any work not requiring an architect/engineer is involved then this certification will be required of the contractor undertaking the work.
- (b) When it is certified that asbestos may become disturbed in a building or structure subject to this subchapter, an assessment performed by the New Jersey Department of Health, county or local health department, or by a private business entity authorized by the New Jersey Department of Health shall be required, unless the requirement for an assessment has been waived.
- 1. Boiler and water storage tank removal projects which require the removal of asbestos insulation from the boiler, water storage tank and piping shall not require an assessment before a permit is issued by the enforcing agency.
- 2. If the assessment indicates that the work and the disturbance which will result from it has made asbestos hazard abatement work necessary, then the construction official shall inform the building owner, or his agent, that all asbestos abatement work shall conform to this subchapter.
- i. The work which will cause the disturbance will not be permitted to proceed until the hazard abatement work is complete or the asbestos-containing material clearly presents no further hazard.
- ii. The construction official shall issue a partial permit for work which clearly will not disturb or interfere with the asbestos hazard abatement work.

§ 5:23-8.7 Inspections; violations

- (a) Pre-commencement inspections shall be conducted as follows:
- 1. Notification in writing to the Asbestos Safety Control Monitor shall be made by the applicant or contractor to request a pre-commencement inspection at least 48 hours in advance of the desired date of inspection. This inspection shall be requested each time another work area is started in a multi-phase project.
 - 2. The asbestos safety technician shall ensure that:
- i. The work area is properly prepared and that all containment measures are in place pursuant to this subchapter;
- ii. All workers shall present to the asbestos safety technician a valid work permit issued by the New Jersey Department of Labor;
- iii. Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards;
- iv. The contractor has a list of emergency telephone numbers at the work area which shall include the asbestos safety control monitor firm employed by the building owner

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and telephone numbers for fire, police, emergency squad, local hospital and health officer, New Jersey Department of Labor and New Jersey Department of Health and New Jersey Department of Community Affairs.

- 3. If all is in order, the asbestos safety technician, shall issue a written notice to proceed with the asbestos abatement in the field. If the project site is not in order, then any needed corrective action must be taken before any work is to commence. Conditional approval shall not be granted.
- 4. The Department reserves the right to make a pre-commencement inspection in addition to the required pre-commencement inspection conducted by the asbestos safety technician before a written notice to proceed is issued.
 - (b) Progress inspections shall be conducted as follows:
- 1. Primary responsibility for ensuring that the asbestos abatement work progresses in accordance with this subchapter rests with the asbestos safety technician. This asbestos safety technician shall continuously be present to observe the progress of work and perform required inspections and tests.
- 2. If the asbestos safety technician observes irregularities at any time, the asbestos safety technician shall direct such corrective action as may be necessary.
- 3. Where a sealant is required to be applied after removal, a pre-sealant inspection shall be conducted to ensure that all asbestos-containing material has been removed properly before the sealant is applied. If the pre-sealant inspection is acceptable to the asbestos safety technician, he should indicate this acceptance in writing.
 - (c) Clean-up inspections shall be conducted as follows:
- 1. Notice for clean-up inspection shall be requested by the contractor at least 48 hours in advance of the desired date of inspection;
- 2. The clean-up inspection shall be conducted prior to the removal of the critical barriers:
 - 3. The asbestos safety technician shall ensure that:
- i. The project site has been properly cleaned and is free of all visible dust and asbestos and asbestos-containing material; and
- ii. All abated asbestos-containing material has been properly placed in a locked secure container outside of the work area.
- 4. If all is in order, and acceptable air results have been achieved, the asbestos safety technician shall issue a written notice of authorization to remove barriers from the work area.
 - (d) Final inspections shall be conducted as follows:

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- 1. Upon notice by the owner or by the contractor and within 48 hours after the removal of the critical barriers, a final inspection shall be made to ensure the absence of any visible signs of asbestos or asbestos-containing materials and that all removed asbestos and asbestos contaminated materials have been properly disposed of off-site in accordance with the rules of the New Jersey Department of Environmental Protection and Energy, *N.J.A.C.* 7:26-1, which is referenced in *N.J.A.C.* 5:23-8.22.
- 2. The Department reserves the right to make a final inspection in addition to the required final inspection conducted by the asbestos safety technician before a certificate of occupancy is issued by the enforcing agency.
 - (e) The Department inspections shall be conducted as follows:
- 1. The Department shall make scheduled and/or unannounced periodic inspections of any work area involving asbestos abatement work for the purpose of enforcing this subchapter.
- (f) Violations: The asbestos safety technician shall ensure that the work conforms to this subchapter. If it is found that the asbestos abatement work is being conducted in violation of this subchapter, the asbestos safety technician shall direct such corrective action as may be necessary. If the contractor fails to comply with the corrective action required, or if the contractor or any of their employees habitually and/or excessively violate the requirements of any rule, then the asbestos safety technician shall order, in writing, that the work be stopped. If the contractor fails to comply with the order, then the asbestos safety technician shall notify the enforcing agency, which shall issue a stop work order to the contractor, have the work area secured until all violations are abated, and assess a penalty, in accordance with *N.J.A.C. 5:23-2.31*, which shall not be reduced or settled for any reason.

§ 5:23-8.8 Certificate of occupancy; certificate of completion

- (a) Certificate of occupancy requirements are as follows:
- 1. It shall be unlawful to re-occupy the portion of a building that was vacated during an asbestos hazard abatement project until a certificate of occupancy has been issued by the enforcing agency. The certificate of occupancy shall be issued upon receipt of a certificate of completion issued by the asbestos safety control monitor and verified by the enforcing agency that the building or a portion of a building is in conformance with all applicable requirements of the Uniform Construction Code and that any walls, floors, trim, doors, furniture or other items damaged during the work shall be repaired or refinished to match existing materials.

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- 2. The application for a certificate of occupancy shall be in writing and submitted in such form as the Department may prescribe and shall be accompanied by the required fee as provided for in this subchapter.
 - i. The application shall include the following:
 - (1) The name and address of the owner;
 - (2) The address of the building or structure;
 - (3) Certificate of Completion submitted by the asbestos safety control monitor.
- 3. If all the information required is complete and in accordance with this subchapter, a certificate of occupancy shall be issued.
 - (b) Certificate of Completion requirements are as follows:
- 1. It shall be unlawful to apply for a certificate of occupancy until a certificate of completion has been issued by the asbestos safety control monitor.
- 2. Within five days of completion of an asbestos hazard abatement project the owner/agent shall file for a certificate of completion from the asbestos safety control monitor.
- 3. The application for a certificate of completion shall be in writing and submitted in such form as the department may prescribe.
 - 4. A Certificate of Completion shall be issued only if:
 - i. All information is complete.
- ii. Final inspection by the asbestos safety technician reveals no visible evidence of asbestos.
 - iii. All requirements of this subchapter have been met.
- iv. An acceptable final air monitoring level has been attained pursuant to *N.J.A.C.* 5:23-8.21 and documentation of that air level has been submitted in writing.

§ 5:23-8.9 Fees

- (a) The enforcing agency that issues the construction permit and the certificate of occupancy for an asbestos hazard abatement project shall establish by regulation or ordinance the following flat fee schedule:
- 1. An administrative fee of \$ 106.00 for each construction permit issued for an asbestos hazard abatement project.

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- 2. An administrative fee of \$ 21.00 for each certificate of occupancy issued following the successful completion of an asbestos hazard abatement project.
- (b) The authorization and reauthorization fees for the asbestos safety control monitor are delineated in *N.J.A.C.* 5:23-8.11.
- (c) The application fee for certification as an asbestos safety technician is delineated in *N.J.A.C.* 5:23-8.10.
- (d) All fees shall be paid by check or money order, payable to "Treasurer, State of New Jersey".

§ 5:23-8.10 Asbestos safety technician

- (a) Any candidate for certification as an asbestos safety technician shall submit an application to the Department accompanied by the required application fee established in (c) below. The requirements for certification as an asbestos safety technician are as follows:
- 1. At least 24 college credits in academic sciences, including biology, chemistry, industrial hygiene, environmental science, physics, geology or related fields; or one year of work experience which included performing environmental assessment activities, which may be substituted for this education requirement;
- 2. Successful completion of a course in air monitoring methods consisting of a minimum of 30 contact hours that shall include hands-on experience with using and calibrating various types of air monitoring equipment; or six months of work experience performing air monitoring including at least 30 hours of on-the-job training, which may be substituted for this education requirement;
- 3. Successful completion of a training course for asbestos worker/supervisors approved by the New Jersey Department of Health pursuant to *N.J.A.C.* 12:120 and *N.J.A.C.* 8:60;
- i. One year of experience in monitoring asbestos abatement activities may be substituted for completion of an approved training course;
- ii. Six months of experience monitoring asbestos abatement may be substituted for completion of an approved training course if the individual is an industrial hygienist certified by the American Board of Industrial Hygiene;
- 4. Successful completion of a course for asbestos safety technicians approved by the New Jersey State Department of Community Affairs;

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- 5. Successful passing of an examination for asbestos safety technicians administered by the National Assessment Institute in cooperation with the National Asbestos Council, or any equivalent examination approved by the Department.
- (b) The Department shall renew the certification following submission of an application, payment of the required fee pursuant to (c) below, and verification by the Department that the applicant meets the requirements for the certification in this section.
- 1. Every two years any certification already issued shall be renewed upon submission of an application, payment of the required fee, and verification by the Department that the applicant has met such continuing educational requirements as may be established by the Commissioner. The Department shall renew the certification previously issued for a term of two years. The renewal date shall be 45 days prior to the expiration date. The expiration dates shall be July 31 or January 31.
- 2. The Department shall issue, upon application, a duplicate certification upon a finding that the certification has been issued and the applicant is entitled to such certification to replace one which has been lost, destroyed, or mutilated. Payment of a fee as established by *N.J.A.C.* 5:23-8.10(c) shall be required.
- 3. The Department may establish by rule continuing education requirements as deemed necessary for the renewal of a certification.
- (c) No application for certification or recertification shall be acted upon unless said application is accompanied by a \$ 66.00 fee.
 - (d) Duties of the asbestos safety technician shall be as follows:
- 1. The asbestos safety technician shall perform all air sampling specified in this subchapter, as delineated in *N.J.A.C. 5:23-8.21* and shall be thoroughly familiar with this subchapter. He or she shall inform the department who his or her employer is at the time of his or her application for certification, and shall notify the department in writing within 10 working days of any change in status or employer. He or she shall have access to all areas of the asbestos abatement project at all times and shall continuously inspect and monitor the performance of the contractor to verify that said performance complies with this subchapter while work is in progress. The asbestos safety technician shall be on site from the initial preparation of the work area through the approved final visual inspection, and shall perform all inspections pursuant to *N.J.A.C. 5:23-8.7*.
- 2. The asbestos safety technician shall direct the actions of the contractor verbally and in writing to ensure compliance with this subchapter. The asbestos safety technician shall require that all workers present a valid asbestos worker performance permit issued by the New Jersey Department of Labor before entering the work area. In matters of negligence and/or flagrant disregard for the safety of any person, including the possibility of contaminating the building environment and the emergence of an unsafe condition at the work area, the asbestos safety technician shall direct such corrective action as may

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be necessary. If the contractor fails to take the corrective action, or if the contractor or any of his or her employees continually violates the requirements of any regulation, then the asbestos safety technician shall order, in writing, that the work be stopped. If the contractor fails to comply with the order, the asbestos safety technician shall notify the enforcing agency, who shall issue a Stop Work Order to the contractor and have the work area secured until all violations are abated.

- 3. The asbestos safety technician shall calculate, based on the actual available output (not the rated output) of the air filtering units, the required number of air filtration units for each work area. This calculation shall be made whenever the volume of the work area changes. The asbestos safety technician shall inform the owner, contractor, and the abatement project designer of any discrepancies between the number of units required and those in operation within the work area. If problems are identified and not corrected, the asbestos safety technician shall inform the enforcing agency who shall take necessary measures to ensure corrective action;
- 4. At the beginning of each work shift, every four hours thereafter, and at the end of the contractor's work day, the asbestos safety technician shall monitor pressure differential by digital manometers with continuous printout or other approved low pressure monitoring devices for each work area. One or more separate monitoring systems shall be installed for every 10,000 square feet of separation surface adjacent to the work area. Pressure monitoring shall be representative of all adjacent areas. The pressure differential shall meet the minimum requirement set forth in *N.J.A.C.* 5:23-8.15(b)9 or 8.17(d)6i or 8.19(c)4ii, as appropriate.
- 5. The asbestos safety technician shall ensure that the contractor smoke tests all the glovebags after they are attached and before the commencement of work.
- 6. For unoccupied buildings, upon receipt of testing results indicating that concentrations above the acceptance criteria established in *N.J.A.C.* 5:23-8.21 have occurred during the abatement project, the asbestos safety technician shall immediately direct corrective action and verbally report these results within 24 hours to the contractor, the owner and the abatement project designer. Such verbal notification shall be followed by written notification to the contractor, the owner and the abatement project designer. A copy shall be sent to the enforcing agency and the Department within three business days from receipt of the results. For occupied buildings, the procedure set forth at *N.J.A.C.* 5:23-8.19 shall be followed.
- 7. The asbestos safety technician shall monitor the removal of all asbestos-contaminated waste from the work area to ensure that it takes place in conformance with *N.J.A.C. 5:23-8.22*, in the following manner:
- i. Direct removal by a collector/hauler registered with the New Jersey Department of Environmental Protection pursuant to *N.J.A.C.* 7:26 and pursuant to New Jersey Department of Transportation rules at *N.J.A.C.* 16:49.

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- ii. Indirect removal by placement in a locked and secure container, for temporary storage, awaiting the New Jersey Department of Environmental Protection registered waste hauler.
- 8. The asbestos safety technician shall keep an up-to-date and comprehensive daily log of on-site activities. The log shall be updated continuously. The name of the project, name of the asbestos safety technician, and date shall be recorded daily. Each entry shall contain the event, the time of event and shall be initialed by the asbestos safety technician. One section of the log shall contain observations concerning contractor compliance with activities required under this subchapter listing all deficiencies encountered. In addition, the log shall list the name of each person entering the work area. The log shall be a bound book and all entries shall be in ink. The log shall be kept at the project site and shall be made available upon request at all times to the owner, the abatement project designer and to appropriate local and State agencies.
- 9. The asbestos safety technician shall prepare a comprehensive final report to include daily logs, required inspection reports, observations and air monitoring results. This report shall be made part of the official record filed by the asbestos safety control monitor.
- (e) Penalties: The Department may suspend or revoke a certification, or assess a civil penalty, in accordance with *N.J.A.C. 5:23-2.31*, for each offense, if the Department determines that an individual:
 - 1. Has violated the provisions of the Uniform Construction Code regulations;
 - 2. Has obtained a certification by fraud or misrepresentation;
- 3. Has aided or abetted in practice as an asbestos safety technician any person not authorized to practice as an asbestos safety technician under the provisions of this subchapter.
 - 4. Has fraudulently or deceitfully practiced as an asbestos safety technician.
- 5. Has been grossly negligent or has engaged in misconduct in the performance of any of his duties:
 - 6. Has failed to maintain a minimally acceptable level of competence;
- 7. Has been found to have accepted or failed to report an offer of a bribe or other favors in a proceeding under this act or other appropriate law of this or any other state or jurisdiction;
 - 8. Has failed to comply with any order issued by the Department;
- 9. Has made a false or misleading written statement, or has made a willful material omission in any submission to the Department;
 - 10. Has failed to enforce this subchapter; or

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- 11. Has performed the duties of an asbestos safety technician without being certified as such.
- (f) In addition to, or as an alternative to, revoking or suspending a certification or assessing a penalty, the Department may issue a letter of warning, reprimand, or censure with regard to any conduct which, in the judgment of the Department, warrants such a letter. Such letter shall be made a part of the certification file of the individual. A copy of such action shall be sent to an officer of the asbestos safety control monitor firm employing the individual.
- (g) Conviction of a crime or an offense shall constitute grounds for revocation or suspension of a certification.

§ 5:23-8.11 Asbestos safety control monitor

- (a) An asbestos safety control monitor may be an individual, partnership, corporation, or other business entity organized for the purpose of enforcing and administering this subchapter.
- 1. Each asbestos safety control monitor shall enter into a contract for each asbestos hazard abatement project with the building owner or his authorized agent. The contract shall specify: the scope of the project with the provision that the asbestos safety control monitor shall carry out all the rules and responsibilities established by this subchapter, how the asbestos safety control monitor is to be paid for its services and the name of the employee who shall serve as the representative of the asbestos safety control monitor authorized to review and approve all documents related to the administration of this subchapter.
- 2. Each asbestos safety control monitor authorized by the Department shall organize its operation to effectively fulfill the requirements of this subchapter. Each person assigned to perform the duties of an asbestos safety technician shall be certified as an asbestos safety technician by the Department.
- 3. The asbestos safety control monitor shall report to the Department through its designee and shall be subject to the orders and directives of the Department in matters relating to the enforcement of this subchapter.
- (b) The Department shall authorize the establishment of an asbestos safety control monitor:
- 1. No person shall undertake the services described in this section or enter into any contract pursuant to this subchapter without first receiving the authorization of the Department.

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- i. Except that applicants who have received notice from the Department that their application is complete and suitable for processing may begin to promote or otherwise make their anticipated availability known provided that the applicant discloses in writing at the time of undertaking any such activity that he has not yet been authorized by the Department.
- 2. Applicants for authorization as an asbestos safety control monitor shall submit an application on the prescribed form, with the required fee pursuant to (h) below, and any additional information the Department may require.
- 3. Following a determination by the Department that an application is complete and suitable for processing, the Department shall review and evaluate the information contained in the application and such other information as the Department shall deem necessary to enable it to make an accurate and informed determination of approval or disapproval. Within 30 days following the receipt of a completed application, the Department shall make its determination as to whether authorization as an asbestos safety control monitor shall be granted or denied, and shall notify the applicant. In the event of denial, the Department shall provide the applicant with a written explanation of the reasons for denial.
 - 4. The application for authorization shall contain information relating to:
- i. The financial integrity of the applicant as evidenced by a reviewed financial statement prepared by an independent certified public accountant;
- ii. The qualifications of the management and technical personnel of the applicant, including a statement that all technical personnel who are to be assigned as asbestos safety technicians are certified by the Department;
- iii. The type of analysis done (for example, NIOSH 7400) and the laboratory(ies) that do the procedures. If the applicant does its own lab analysis, it shall list the type of equipment used and the personnel using it, with their qualifications. All laboratories shall be accredited by the National Institute of Standards and Technology (NIST). The laboratory shall be a current proficient participant in the American Industrial Hygiene Association Proficiency Analytical Testing Program or any other recognized equivalent program for PCM. All laboratory analysis shall be performed in accordance with *N.J.A.C.* 5:23-8.21;
- iv. The names of all technical personnel, including asbestos safety technicians with their certification numbers, and their range of salaries and other compensation;
- v. The policies and procedures of the applicant for the hiring, training, education, and supervision of all technical personnel involved in the supervision and performance of duties pursuant to this subchapter;
 - vi. The prior experience of the applicant in performing similar or related functions;

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- vii. The capability of the applicant to review plans and specifications and to inspect asbestos abatement work to ensure that the completed work is in compliance with this subchapter;
- viii. A statement that the applicant is not affiliated with, or influenced or controlled by any producer, manufacturer, supplier or vendor of products, supplies or equipment used in asbestos hazard abatement or by any abatement contractor;
 - ix. Proof of insurance as required pursuant to N.J.A.C. 5:23-8.11(c)3v; and
- x. The name and address of an agent upon whom service upon the business organization may be made within the State of New Jersey. The agent shall be either an individual who is a resident of the State of New Jersey or a corporation maintaining an office within the State of New Jersey. The agent listed shall be the same as the agent on record with the New Jersey Department of Treasury.
- 5. Authorization shall be valid for a period of one year. The expiration dates shall be March 31 or September 30.
- 6. Applications for reauthorization shall be filed with the Department at least 60 days prior to the scheduled expiration for the current authorization from the Department. The asbestos safety control monitor shall make current the information previously submitted to the Department. The asbestos safety control monitor shall provide additional information as the Department may request. The application shall be accompanied by the fee established pursuant to (h) below. The Department may conduct such additional investigations of the applicant as it may deem necessary.
- i. Within 30 days following receipt by the Department of an application for reauthorization, the Department shall make its determination as to whether the asbestos safety control monitor continues to meet the requirements of the regulations. In the event of disapproval, the Department shall provide the asbestos safety control monitor with a written explanation of the reasons for such disapproval. Each reauthorization shall expire one year from the date of the current authorization from the Department.
- ii. The Department, on its own motion or at the request of any asbestos safety control monitor, may grant a temporary reauthorization of such agency for a period not to exceed 60 days.
- 7. It shall be the responsibility of the applicant to notify the Department of any change in the identity, mailing address, office or residence address or phone number of the applicant or representative. Any change shall be reported to the Department in writing within 30 days of the change.
- (c) Records shall be maintained by the asbestos safety control monitor of all inspections, applications, approved plans, air tests, log sheets and any other information that may be required by the enforcing agency or the department. These records shall be

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open to department audit and shall not be destroyed or removed from the offices of the asbestos safety control monitor without the permission of the department.

- 1. The asbestos safety control monitor shall provide the Department with written notification of any change of licensed personnel and any change of principals within 30 days.
- 2. The enforcing agency shall be the sole agent for the collection of all fees and penalties from the property owner, the designated agent or anyone in their employ.
 - 3. Each asbestos safety control monitor shall have the following responsibilities:
- i. To maintain an adequate number of certified staff to enforce the Asbestos Hazard Abatement Subcode for the projects contracted;
- ii. To review and approve the plans and specifications, release them in writing, and forward them to the enforcing agency for issuance of a permit;
 - iii. To be subject to the department's rulings, directives and orders;
- iv. To provide adequate supervision to its employees to ensure conformance to the provisions of this subchapter;
- v. To carry liability insurance equal to that required of private enforcing agencies pursuant to *N.J.A.C.* 5:23-4.14(e)5;
- vi. To process and return all documents, plans, specifications, and applications within the time frame specified by this subchapter.
- vii. To provide technical assistance to the building owner in the preparation of a construction permit application;
- viii. To provide written notification of the start of a project to the department a minimum of 10 days prior to the start of the project and telephone notification to the department by the asbestos safety technician on the first day of the start of the project;
 - ix. To perform all required inspections and reinspections pursuant to this subchapter;
 - x. To perform all tests required by this subchapter;
- xi. To give testimony at a hearing or in court, as required by the construction official or the Department;
- xii. To prepare all reports required by this subchapter or as may be required by the Department from time to time;
 - xiii. To meet its obligations under its contract with the building owner;
- xiv. To issue and maintain documentation and certification, including, but not limited to, plan release, permit application and permit issued by the enforcing agency (if a firm is the duly authorized agent of the owner), variations submitted, written notice to proceed,

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written notice to remove barriers, certificate of completion, violation notices, daily logs, inspection records, observations, calculations, backup records, air monitoring results and a separate listing of any contractor deficiencies observed during the course of the work;

- xv. To ensure the attendance of all technical and supervisory employees at required training and orientation programs; and
- xvi. Upon completion of an asbestos hazard abatement project, the asbestos safety control monitor shall submit a final comprehensive report consisting of, but not limited to, plan release, permit application and permit issued by the enforcing agency (if a firm is the duly authorized agent of the owner), variations submitted, written notice to proceed, written notice to remove barriers, certificate of completion, violation notices, daily logs, inspection records, observations, calculations, backup records, air monitoring results and a separate listing of any contractor deficiencies observed during the course of the work. The final report shall be submitted to the building owner within 60 days of issuance of the Certificate of Completion. A copy of the final report shall be made available to the Department within 10 days of written request.
- (d) Whenever an asbestos safety control monitor enters into a contract to provide asbestos safety control monitoring services in connection with an asbestos hazard abatement project, the asbestos safety control monitor shall not have any economic relationship with another party involved with the project. Laboratory services needed by the asbestos safety control monitor shall not be provided by any laboratory that has any economic relationship with the abatement contractor.
- 1. The asbestos safety control monitor may perform air monitoring required pursuant to the related OSHA requirements only through a contract with the building owner.
 - (e) Penalty, suspension and revocation procedures are as follows:
- 1. In addition to any other remedies provided by the Uniform Construction Code regulations, *N.J.A.C. 5*:23, the Department may suspend or revoke its authorization of any asbestos safety control monitor or assess a civil penalty, in accordance with *N.J.A.C. 5*:23-2.31, if the Department determines that the authorization or reauthorization was based on the submission of fraudulent or materially inaccurate information, or that the authorization or reauthorization was issued in violation of this subchapter, or that a change of facts or circumstances makes it unlikely that the asbestos safety control monitor can continue to discharge its responsibilities under this subchapter in a satisfactory manner, or any provision of this subchapter has been violated, or that the asbestos safety control monitor has been negligent or has engaged in misconduct in the performance of any of its duties, or that the asbestos safety control monitor has failed to maintain a minimally acceptable level of competence.

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- i. During the period of suspension, the affected asbestos safety control monitor shall not be authorized to discharge any of its responsibilities under this subchapter unless otherwise specified in the notice of suspension or order of the Department.
- 2. The Department shall notify such asbestos safety control monitor of its suspension or revocation in writing. Copies of the notice of suspension shall be forwarded by the Department to all building owners with implementing contracts with the affected asbestos safety control monitor. The suspension shall be effective on the date the affected asbestos safety control monitor receives the notice of suspension or on any later date that may be designated in the notice of suspension.
- 3. The Department may revoke its approval of any asbestos safety control monitor without previously suspending its authorization. In such event, the Department shall send a written notice to the affected asbestos safety control monitor of its intention to consider revocation of its authorization stating the grounds therefore. The notice shall be sent to the affected asbestos safety control monitor and to all building owners with implementing contracts with the affected asbestos safety control monitor.
- i. No such asbestos safety control monitor shall reapply for approval as an asbestos safety control monitor until the expiration of one year from the date of the order of revocation.
- 4. Upon the suspension or revocation of approval of an asbestos safety control monitor, any building owner with an implementing contract with the asbestos safety control monitor shall have the right to terminate its contract with such asbestos safety control monitor and be free of all obligations thereunder and to enter into an implementing contract with any other asbestos safety control monitor.
- (f) In addition or as an alternative to revoking or suspending an authorization, or assessing a penalty, the department may issue a letter of warning, reprimand, or censure with regard to any conduct which, in the judgment of the department, warrants such a response. Such letter shall be made part of the authorization file of the firm.
- (g) Conviction of a crime or an offense shall constitute grounds for revocation or suspension of an authorization.
 - (h) Authorization and reauthorization fees are as follows:
- 1. Authorization fee: Any asbestos safety control monitor submitting an application to the Department under this subchapter for approval as an asbestos safety control monitor shall pay a fee of \$ 5,292 for the authorization which is sought.
- 2. Once authorized, the asbestos safety control monitor shall pay a fee of six percent of the gross revenue earned solely from asbestos safety control monitoring activities. This fee shall be payable quarterly, accompanied by a completed form prescribed by the Department, and is due within one month of the close of the indicated quarter according to the following schedule: First quarter--January 1 to March 31; second quarter--April 1

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to June 30; third quarter--July 1 to September 30; and, fourth quarter--October 1 to December 31. The monies obtained from the preparation of plans and specifications and payments for laboratory services shall not be included in the calculation of this quarterly fee.

3. Reauthorization fee: Any asbestos safety control monitor submitting an application to the Department under this subchapter for reapproval as an asbestos safety control monitor shall pay a fee of \$ 2,646.

§ 5:23-8.12 Application of asbestos

- (a) This section shall apply to the application of asbestos, except as provided in (a)1 below.
- 1. This section shall not apply to asbestos materials which are applied in solid, non-friable form, such as floor tiles or cement pipe.
- (b) The requirements of this section are set forth in order to prevent the contamination of the building environment which may be caused by improperly performed asbestos application work.
- 1. No person may cause or allow surface coating by spraying on any building structure, facility, installation or internal or external portion thereof, using asbestos or any friable material containing in excess of 0.25 percent by weight of asbestos. See *N.J.A.C.* 7:27-17.
- 2. The direct application of asbestos material during construction or renovation of structures, facilities or installations by means such as troweling by hand shall be prohibited.
- 3. The only permissible applications of asbestos-containing materials during construction or renovation of structures, facilities or installations shall be those in which the asbestos is securely bound into a solid matrix before the application is performed, such as floor tiles in which asbestos is a minor component.

§ 5:23-8.13 Pre-project procedures

Before an asbestos abatement project begins, the owner shall have evaluated whether or not the scope of work for a specific project will require that all surfaces in the work area are to be HEPA vacuumed and/or wet-wiped. This is in order to remove any dust which may contain asbestos and might, therefore interfere with the final inspection and final air clearance level needed to reoccupy the building. The surfaces to be cleaned shall include, but not be limited to, all horizontal and vertical surfaces and such inside

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spaces as room ventilators, storage lockers, and utility and storage closets. The cleaning shall be accomplished by trained employees of the building owner as delineated in this subchapter before the asbestos abatement project begins or it shall be made part of the scope of work of an asbestos abatement project to be completed by the licensed contractor.

§ 5:23-8.14 Operations and maintenance activities

- (a) Operations and maintenance activity, as defined in N.J.A.C. 5:23-8.2, involves asbestos abatement work that may be performed without application or notice to the enforcing agency. Mechanical, electrical, plumbing or general construction work that involves the incidental disturbance of asbestos-containing material shall also be considered an operations and maintenance activity. Examples include, but are not limited to, corrective action which includes removal, repair, encapsulation and enclosure of asbestos-containing insulation on pipes, beams, walls or ceilings, etc.; disturbance or routine maintenance activities which may involve asbestos-containing material; clean up of asbestos debris from a floor; and maintenance activities that may include the removal of asbestos-containing material, if required in the performance of another maintenance activity not intended as asbestos abatement, or minor repairs to damaged insulation which do not require removal. The stabilization of any amount of asbestos-containing materials used to cover piping, boilers, tanks, structural members, or similar equipment by applying duct tape, re-wettable glass cloth, canvas, cement, or other sealable material to seal exposed areas where asbestos fibers may be released, shall also constitute an operations and maintenance activity. Asbestos hazard abatement projects shall not be broken down into smaller component parts in order to qualify as an operation and maintenance activity.
- (b) Specific records of each operations and maintenance activity shall be kept on file at a central location by the owner of the facility and shall be open for review and audit by the enforcing agency and for public inspections during normal business hours.
 - 1. The information required shall be:
 - i. Location/name/number of building;
 - ii. Exact locations of the work area within the building;
 - iii. Type of abatement work conducted;
 - iv. Scope of work;
 - v. Type of replacement material used (if applicable);
 - vi. Date;
 - vii. Name(s) and address(es) of personnel; and

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- viii. Location of the disposal site.
- (c) A certificate of occupancy or completion is not required for an operations and maintenance activity.
 - (d) Requirements concerning wetting methods are as follows:
- 1. Wetting methods shall be used whenever asbestos-containing materials are disturbed.
- 2. Asbestos materials shall be wetted using amended water applied by means of an airless sprayer to minimize the disturbance of asbestos-containing material. Asbestos-containing materials shall be wetted from the initiation of the maintenance or renovation operation that disturbs asbestos-containing material. The wetting agents shall be used continually throughout the work period to ensure that any dry asbestos-containing material exposed in the course of the work is water-soaked and remains wet until final disposal.
- (e) Asbestos-containing material shall be disposed of as specified in *N.J.A.C.* 5:23-8.22.

§ 5:23-8.15 Asbestos hazard abatement projects

- (a) No asbestos hazard abatement work including preparation shall be performed or continued without having a certified asbestos safety technician at the work area.
- (b) Protective clothing, equipment, and general procedures for asbestos abatement shall be subject to the following requirements:
- 1. Only authorized personnel shall be permitted in the work area. The contractor shall provide the required respirators and protective clothing to all who may inspect or visit the work area:
- 2. The protective clothing and equipment requirements set forth in this section shall be used to prevent the contamination by persons engaged in asbestos abatement projects of areas and buildings accessible to or used by the public;
- 3. All persons entering the work area shall wear protective clothing. All clothing worn during removal operations shall be disposed of as contaminated waste. The requirement that clothing be disposed of as contaminated waste shall not include rubber boots, respirators, eye protection, hard hats, and other protective clothing, which can be easily cleaned.
- 4. Polyethylene bags shall be six mil thick and of sufficient size for their intended use;

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- 5. All tape, spray-on adhesives, glove bags, glue, and other materials used in the abatement process shall be of sufficiently high quality to serve their intended purpose;
- 6. The contractor shall have available sufficient inventory of protective clothing, respirators, filter cartridges, polyethylene sheeting, duck tape, spray-on adhesives, and air filters. Sufficient personal protective equipment shall be available for usage by authorized personnel;
- 7. The contractor shall have available shower stall(s) and sufficient plumbing for these showers including hot and cold running water and sufficient hose length and drain systems or an acceptable alternate such as a portable decontamination trailer with showers. Waste shower water shall be added to asbestos-contaminated waste material before disposal in a permitted asbestos waste landfill or it shall be solidified using an approved polymer to prevent leaks or accidental spills within a facility or during transport for disposal to a permitted asbestos waste landfill or it shall be filtered using a five [mu] filter and disposed of in the sanitary drain, if allowed by local treatment works by regulation or as allowed by permit;
- 8. The contractor shall have available adequate ladders and/or scaffolds and sufficient temporary lighting equipped with ground fault circuit interruptors for the asbestos safety technician and all others who may inspect the work;
- 9. The contractor shall have available HEPA filter equipped air filtering equipment capable of filtering asbestos fibers to 0.3 [mu] at 99.97 percent efficiency and of sufficient quantity and capacity to cause a complete air change or total air filtration within the work area at least once every 15 minutes. Nothing in this subchapter shall be construed to limit the maximum exhaust capacity from the work area. If the situation warrants, the specifications for the abatement project may require additional air changes per hour. The exhaust capacity from the work area shall be sufficient to establish a pressure differential between the work area and all adjacent spaces greater than or equal to 0.03 inches w.c. for unoccupied buildings and greater than or equal to 0.05 inches w.c. for occupied buildings.
- i. Pressure differential shall be monitored by digital manometers with continuous printout or other approved low pressure monitoring devices. The asbestos safety technician shall zero and level the gauges each time a reading is taken.
- ii. One or more separate pressure monitoring systems shall be installed by the asbestos safety control monitor firm near the entrance(s) to the work area and between the work area and any interior spaces from which make-up air is drawn.
- iii. In unoccupied buildings, if the pressure differential drops below 0.01 inches w.c., the asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the pressure loss and the contractor shall institute corrective action as indicated.

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- iv. In occupied buildings, the procedures set forth in *N.J.A.C. 5:23-8.19* shall be followed.
- 10. Air shall flow into the work area through all openings, including the decontamination chamber and waste exit ports, any areas in the work area where air leakage may occur, and other controlled makeup air inlets. Air shall exhaust through the air pressure differential filtration unit by means of flexible or solid duct leading outside the building. The air-filtering equipment should be positioned at a maximum distance from the decontamination chamber to maximize filtration of airborne fibers. Sufficient air shall be exhausted by an approved HEPA equipped vacuum truck or HEPA equipped air filtration units when necessary to provide air pressure differential. Air filtration units shall be in operation at all times;
- 11. Asbestos-containing material shall be disposed of as specified in *N.J.A.C.* 5:23-8.22.
 - (c) Decontamination procedures are as follows:
- 1. The contractor shall provide an adequate decontamination unit consisting of a serial arrangement of rooms or spaces adjoining the work area or a decontamination trailer. Each airlock shall be clearly identified and separated from the other by polyethylene crossover sheet doors designed to minimize fiber and air transfer as people pass between areas. A minimum of two layers of polyethylene sheeting shall be required for floors, walls, and the ceiling for on-site constructed decontamination units. Polyethylene crossover sheet doors shall have at least three layers of polyethylene sheeting and be weighted so as to fall into place when people pass through the area. Decontamination chamber doors shall be of sufficient height and width to enable replacement of equipment that may fail and to safely stretcher or carry an injured worker from the site without destruction of the chamber or unnecessary risk to the integrity of the work area. Such doors must be at least four feet wide, and the distance between sets of doors must be at least four feet.
- i. As an alternative to the use of polyethylene crossover sheet doors, any other suitable method to accomplish this end shall be acceptable, if it is approved by the asbestos safety control monitor. Alternative doors shall provide for adequate exiting in accordance with the building subcode of the Uniform Construction Code.
 - 2. The decontamination areas shall consist of the following:
- i. Clean room: In this room persons remove and leave all street clothes and put on clean disposable coveralls. Appropriate NIOSH approved respiratory protection equipment is also picked up in this area. No asbestos contaminated items are permitted in this room.

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- ii. Shower room: This is a separate room used for transit by cleanly dressed people entering the work area from the clean room and for showering by them after they have undressed in the equipment room. This is a contaminated area.
- iii. Equipment room: Work equipment, footwear, and all other contaminated work clothing shall be stored here. This is also a change and transit room for people. All areas between the shower room and work area shall be considered part of the equipment room. This is a contaminated area.
- 3. In order to prevent contamination of the environment, the contractor shall be responsible for controlling access at the work area and shall maintain a daily log of personnel entering the work area. A list of names of workers shall be posted with their start and stop times for each day. In addition, the contractor shall ensure that all persons who enter the work area shall observe the following work area entry and exit procedures:
- i. Person enters clean room and removes street clothing, puts on protective clothing and a respirator, and passes through shower room into equipment room.
- ii. Any additional required clothing and equipment previously deposited in the equipment room is put on.
 - iii. Person proceeds to work area.
- iv. Before leaving the work area, the person shall remove all gross contamination and debris from the coveralls using a vacuum with a high efficiency particulate air (HEPA) filter. In practice, this is usually carried out by one person assisting another.
- v. The person then proceeds to equipment room and removes all clothing except approved respirators. Extra clothing may be stored in contaminated end of the unit. Disposable coveralls are placed in a bag for disposal with other material.
- vi. The person then proceeds directly into the shower room. Respirators shall be taken off last to prevent inhalation of fibers during removal of contaminated clothing, and shall not be removed until they have been washed free of dust.
- vii. After showering, the person moves to the clean room and dresses in street clothing prior to exiting.
- viii. Respirators are picked up, washed thoroughly, and disinfected as required, wrapped and stored in the clean room.
- 4. The contractor shall ensure that filters in cartridge type respirators used during the preparation and abatement phase of the project are removed, wetted, and discarded as contaminated waste. All new filters shall be in place in the respirator prior to reuse. For powered air purifying respirators or supplied air respirators, the manufacturer's instructions shall be followed about the proper decontamination sequence.

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- 5. There shall be no smoking, eating, or drinking in any contaminated areas (shower room, equipment room, and work area). Respirators shall be worn in all contaminated areas.
- 6. Nondisposable footwear shall remain inside the contaminated area until completion of the activity, and shall be thoroughly cleaned at that time.
 - (d) Preliminary preparations in the work area shall be conducted as follows:
- 1. The contractor shall provide and post in clearly visible locations, appropriate caution and/or danger signs indicating that asbestos work is being conducted and that unprotected persons should not enter;
- 2. Employees of the contractor permitted pursuant to *N.J.A.C.* 8:60 and *N.J.A.C.* 12:120 or persons employed by the building owner who have successfully completed a maintenance/custodial or worker training course approved by the New Jersey Department of Health shall clean with wet cloths and/or with HEPA vacuums as appropriate all objects that can be removed from the work area without disrupting the asbestos-containing material. Objects shall include, but not be limited to, furniture, equipment, drapes, and curtains. The cloths used for cleaning shall be disposed of as asbestos contaminated waste. If the room and objects within it are shown to be uncontaminated by asbestos, then other employees of the building owner or contractor may remove such objects;
- 3. The contractor shall install or build a decontamination facility in accordance with this section;
- 4. The contractor shall arrange for shutting down and sealing off all electrical, heating, cooling, and ventilating or other air handling systems. However, if approved by the asbestos safety control monitor, the lighting and the receptacles in the work area may be used if these are properly protected by ground fault circuit interruptors and can be adequately cleaned following abatement;
- 5. The contractor shall establish written emergency procedures to be posted within each work area. These procedures shall include plans for medical emergencies, fire evacuation, temporary loss of electrical power or water and procedures for repair and clean-up following temporary breach of containment barriers.
 - (e) Isolation and barrier construction in the work area shall be conducted as follows:
- 1. Before removing any asbestos from the work area, the contractor shall ensure that the outer perimeters of the work area have been securely sealed off from the rest of the building;
- 2. All vertical and horizontal surfaces except those of asbestos containing materials shall be sealed with watertight polyethylene sheeting except as provided in (e)3 below;
 - 3. The only permissible exception to total enclosure shall be:

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- i. An entrance airlock with showers and a decontamination chamber:
- ii. A debris removal airlock to permit cleaning and removing asbestos waste;
- iii. Staircases; and
- iv. Controlled makeup air inlets into the work area.
- 4. Polyethylene sheeting shall be used to isolate contaminated from uncontaminated areas. This polyethylene sheeting shall be replaced or repaired immediately if torn or damaged. One layer of polyethylene sheeting shall be required for walls and two layers of polyethylene sheeting shall be used to seal open space between work areas and noncontaminated areas and for all floors. In buildings required by the Uniform Construction Code to be of noncombustible construction, all materials used to construct separation barriers must meet the Uniform Construction Code, building subcode requirements for that building and all plastics used must be flame resistant.
 - (f) Initial activity in the work area shall be conducted in the following order:
- 1. Remove filters from all heating, ventilating, and air conditioning systems. Wet the filters and place them in polyethylene bags, double bagged with visible labels, for disposal as asbestos-containing waste. Squeeze all excess air out of the bag before sealing to prevent puncture during disposal. Secure bags by twisting, taping, folding over, and sealing them with duct tape.
- 2. The contractor shall wet clean and/or HEPA vacuum all non-removable non-asbestos items such as radiators and suspended light fixtures in the work area, including built-in equipment; and shall cover with two layers of polyethylene sheeting taped securely in place;
- 3. The contractor shall detach and wet clean removable electrical, heating, and ventilating equipment and other items which may be connected to the asbestos surfaces. These items shall be removed from the work area and returned and reattached to their proper place when the work area has been decontaminated and final air testing has provided satisfactory results;
- 4. The contractor shall seal all floor, wall, and ceiling penetrations with suitable material such as expanding foam insulation before covering the surfaces with polyethylene sheeting. The contractor then shall seal all openings between the work area and uncontaminated areas including but not limited to, windows, doorways, elevator openings, skylights, corridor entrances, floor and sink drains, air ducts, grills, grates and diffusers with critical barriers consisting of two layers of polyethylene sheeting taped securely in place or stapled or fastened by spray-on adhesives, glue beads, or horizontal wood battens or the equivalent. Floor drains shall be sealed individually and then covered as all other floor surfaces with two layers of polyethylene sheeting. Separation barriers may be constructed to support the critical barriers. Separation barriers shall not block any required means of egress;

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- 5. For floor covering two layers of polyethylene sheeting shall be used. The first layer of floor sheeting shall extend up the wall at least 12 inches. The second layer shall be extended up walls at least 24 inches. Sheeting shall be sized so as to minimize the number of seams necessary. No seams shall be located at the joints between walls and floors;
- 6. Wall sheeting shall consist of one layer of polyethylene sheeting. It shall be installed to minimize joints and shall overlap floor sheeting by at least 18 inches. No seams shall be located at the corners. Wall coverings shall be taped first to the upper most edge of the wall and shall hang straight down;
- 7. When a strippable coating is used in place of polyethylene sheeting, it must be manufactured for the specific application required for walls, floors, or windows.
- i. When dry, the strippable coating must have a class A rating as a building material and must meet the following requirements when tested in accordance with ASTM E-84: flame spread no greater than 20, fuel contributed 0, and smoke developed no more than 110.
- ii. The strippable coating shall be applied uniformly in such a manner as to achieve a minimum uniform final thickness of six mil for each layer required pursuant to this subchapter.
- iii. Manufacturer's specifications shall be followed for the method of application and for the protection of the applicators and building occupants.
- iv. Use of the product shall be authorized in advance by the asbestos safety control monitor firm. The material shall be delivered to the project site in unopened, factory-labeled containers.
- 8. As all existing ventilating systems in work area are to be sealed throughout the removal operation, an alternative system shall be utilized. Install approved HEPA equipped air filtration units with filters in place. HEPA equipped air filtration units shall be of sufficient number and capacity to ensure that total air volume is exchanged at least once every 15 minutes and an acceptable pressure differential is established and maintained. These units shall be rated by the manufacturer as to their actual working air capacity and field tested pursuant to *N.J.A.C.* 5:23-8.10(d)4.
 - (g) Sequence of asbestos removal activities shall be as follows:
- 1. The asbestos-containing material shall be sprayed with water containing an additive to enhance penetration (amended water) or removal encapsulant. All wetting agents shall be tested on a small area before use to ensure effectiveness. A fine low-pressure spray of this solution shall be applied to prevent fiber disturbance preceding removal. The removal encapsulant or amended water shall be sprayed on as many times and as often as necessary to ensure that the asbestos material is adequately

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wetted throughout (especially that asbestos nearest the substrate) to prevent dust emission.

- 2. As a method of organizing the asbestos removal work, workers shall begin working on the areas nearest to the decontamination unit and work towards the HEPA equipped air filtration units. If this is not feasible, the asbestos safety control monitor firm shall approve an alternative to this requirement.
- 3. The wet material from each section shall be packed and sealed into labeled six mil polyethylene bags and double bagged with visible labels or placed in labeled, leak-proof containers, prior to starting the next section. Water-soaked fallen material shall be picked up while wet.
- 4. Contaminated material containing sharp edged items shall be cut to manageable size while adequately wet, and then placed in suitable leak-tight and puncture-proof containers or wrapped individually in two separate polyethylene sheets and double bagged.
- 5. Bags and drums shall be marked with the label prescribed by 40 CFR Part 61, Subpart M of the US EPA, 29 CFR 1926 of OSHA, and 49 CFR--Parts 100-199 of the US DOT Hazardous Waste Hauling regulations. The outside of all containers shall be wet-cleaned or HEPA vacuumed before leaving the work area.
- 6. After completion of this removal phase (stripping), all surfaces from which asbestos has been removed shall be scrubbed using nylon or bristle brushes and wet sponged or cleaned by an equivalent method to remove visible asbestos-containing material. During this work, the surfaces being cleaned shall be kept wet using amended water or a removal encapsulant. All disposable equipment shall be packaged for disposal. Containers shall be washed with amended water or a removal encapsulant and shall have all exterior particulate matter removed prior to removal from the contaminated area.
- 7. All accessory equipment shall be moved to the equipment room and decontaminated for removal.
- 8. All free water (in contaminated areas) shall be retrieved and added to asbestos-contaminated waste and/or placed in plastic lined leak-tight drums and/or solidified with an acceptable polymer or it shall be filtered using a five [mu] filter and disposed of in the sanitary drain, if allowed by local treatment works by regulation or as allowed by permit.
 - 9. Final clean-up of the work area may commence.
 - (h) Final clean-up of the work area shall be conducted as follows:
- 1. The contractor shall first clean all surfaces in the work area using a fine spray or mist of amended water or removal encapsulant applied to all surfaces followed by the wet-wiping procedure using disposable cloths. These cloths shall be disposed of or

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rinsed thoroughly on a frequency sufficient to eliminate visible accumulation of debris. The contractor shall allow all surfaces to dry before re-entering the work area and proceeding to (h)2 below.

- i. The contractor shall notify the asbestos safety technician in writing that a presealant inspection is requested.
- 2. After completion of cleaning all surfaces in the work area and upon receiving a satisfactory pre-sealant inspection, the contractor shall spray coat all dried exposed surfaces with a sealant. The color of this coat shall be separate and distinct from the underlying substrate. The surfaces to be coated shall include surfaces from which asbestos-containing materials have been removed (such as ceilings) and polyethylene which has been used to cover walls, floors and non-removable fixtures and equipment.
- 3. The polyethylene sheeting used to protect floors, walls, fixtures and equipment shall be carefully removed and rolled up, with the contaminated portion on the inside, and packaged for disposal. Tape and any other debris shall also be disposed of in sealed polyethylene bags labeled as asbestos-contaminated waste.
- 4. Wet clean with amended water or a removal encapsulant all walls, floors, woodwork, ceilings, electric light fixtures and other surfaces. Allow all surfaces to dry and repeat procedure. Cloths or sponges used in the cleaning operation shall be disposed of as contaminated waste.
- 5. The polyethylene sheeting used to maintain critical barriers between work areas and clean areas such as those in doorways, windows and air vents shall be sprayed with encapsulant, but not removed until air monitoring is completed and satisfactory results have been obtained.
 - 6. After completion of the cleaning operations the contractor shall:
- i. Notify the asbestos safety technician that a clean-up inspection can be performed to ensure all visible asbestos has been removed and the area is dust free:
 - ii. Request final air clearance monitoring of the work area.
- 7. After the work area is found to be in compliance with the acceptance criteria, the following tasks shall be performed by the contractor:
 - i. All critical barriers shall be removed and bagged in polyethylene bags for disposal;
 - ii. The inside of windows shall be washed:
- iii. Any walls, floors, trim, doors, furniture or other items damaged during the work shall be repaired and refinished to match existing material;
- 8. Notice for a final inspection shall be made by the owner or contractor to the asbestos safety control monitor.

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- 9. Upon receiving a satisfactory final inspection, application for a Certificate of Completion may be made.
- (i) Special precautions shall be implemented, where appropriate, including, but not limited to, the following examples:
- 1. Asbestos abatement projects involving ceiling tile and T-grid components, elevators, carpet, contaminated soil and projects in tunnels, crawl spaces, plumbing access panels, and/or involving live electrical panels or live steam lines are likely to present unique conditions that will require special precautions in addition to the procedures described in this section. In instances where special precautions need to be instituted, they shall be described in plans and specifications approved by the asbestos safety control monitor firm.

§ 5:23-8.16 Asbestos encapsulation and enclosure

- (a) Encapsulation constitutes spraying friable asbestos-containing material with a liquid sealant (not including paint) that helps bind the asbestos together with other material components to adhere it firmly to the building structure.
- 1. The requirements of this section are set forth in order to prevent the contamination of the building environment which may be caused by improperly performed asbestos encapsulation work.
 - i. Encapsulation shall not be performed where:
 - (1) Asbestos-containing material is friable, damaged, or deteriorating;
 - (2) Effective long-term inspection of the encapsulated site cannot be assured;
- (3) The source of asbestos is highly accessible to building occupants and damage to material is possible;
 - (4) The asbestos-containing material does not adhere well to the substrate;
 - (5) There is existing or potential water damage to asbestos containing material:
- (6) The asbestos-containing material is more than one inch thick; and is used to cover ceilings, walls, beams, or other structural members;
 - (7) The asbestos-containing material is subject to high vibration.
 - ii. Encapsulation may be performed when:
 - (1) Damage to the material is improbable;
 - (2) The asbestos-containing material is granular or cementitious;

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- (3) The encapsulating material is known to bond asbestos to the subsurface and asbestos-containing material and also retains its bonding integrity;
- (4) Asbestos-containing material has been removed and loose fibers remain which should be bonded.
- iii. If encapsulation is used as a method of asbestos abatement the following maintenance procedures shall be employed:
- (1) A periodic monitoring and maintenance program consisting of inspection at least annually to check for damage to all encapsulated surfaces;
- (2) Maintenance of records by the building owner, on the locations and condition of the encapsulated material;
- (3) The removal of encapsulated asbestos when conditions change, making encapsulation no longer an appropriate method of asbestos abatement.
- iv. Sealants considered for use in encapsulation shall first be tested to ensure that the sealant is adequate for its intended use. A section of the asbestos-containing material shall be evaluated following this initial test application of the sealant to quantitatively determine the sealant's effectiveness in terms of penetrating and hardening the asbestos-containing material, its toxicity, its flammability, its tolerance to disturbance or abuse, its solubility (dissolvability) in water, its effects on the acoustical properties of the asbestos-containing material, and its tolerance to top-covering paints. The United States Environmental Protection Agency, Office of Toxic Substances, has developed guidelines for the use of encapsulants on asbestos-containing materials which discuss advantages and disadvantages of encapsulation. The American Society of Testing and Materials (ASTM) Committee E06.21.06E on Encapsulation of Building Materials has developed a guidance document to assist in the selection of an encapsulant once a decision to encapsulate has been made. When a choice of an encapsulant has been made, written justification of this choice (based on the characteristics of the encapsulant, the asbestos-containing material to be encapsulated, and the substrate surface underneath the asbestos-containing material) shall be included in the job specifications, and a copy of this justification shall be available for review at the job site.
- v. Before encapsulation is performed, all loose and hanging asbestos-containing material shall be removed while damp, and disposed of in accordance with this subchapter.
- vi. Filler material used to repair damaged and missing areas of asbestos-containing material shall contain no asbestos, shall adhere well to the substrate and shall provide an adequate base for the encapsulating agent.

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- vii. Encapsulated asbestos containing materials shall be identified by signs, labels, color coding or some other mechanism to warn persons who may be required to disturb the material that asbestos is present.
 - viii. Where encapsulants are sprayed on asbestos-containing materials:
- (1) Low pressure airless spray shall be used. The airless spray gun shall have an appropriately sized tip which shall be tested by briefly spraying the encapsulant onto a surface from approximately 12 inches away. An appropriately sized tip will spray the encapsulant in a fan approximately eight inches wide; it will also distribute the encapsulant uniformly within the fan, giving even coverage.
- (2) A suitable quantity of HEPA filtration units shall be used during the encapsulation process which shall have sufficient capacity to cause one complete air exchange every 30 minutes.
- (3) At least three coats of the encapsulant shall be applied to the surface of the asbestos-containing material. Each coat shall be applied in a two-step procedure. The first step is to apply a light mist coat to moisten and seal any loose fibers and keep them from breaking away from the surface. This mist coat should be applied in three or four quick passes with the gun held 18 to 24 inches from the surface. After an area of 16 to 20 square feet has been given the mist coat, a heavier coating is applied, using 8 or 10 passes with the gun held 10 and 12 inches from the material. The gun should be kept in constant motion to create a smooth and even coat. This two-step application shall be considered one coat of encapsulant. Each subsequent coat shall be applied at a 90 degree angle to the direction of the preceding coat application, to ensure complete coverage of the asbestos-containing material. When questions rise regarding drying time, curing time, dilution, or use under different weather conditions, the manufacturer's recommendations and instructions shall be consulted.
- (4) All other preparation, decontamination, and work requirements and procedures used in encapsulation projects shall be the same as those used in removal projects.
- ix. Sealants used in the encapsulation shall not alter the existing fire rating and shall be flame resistant and meet the flame spread and smoke generation requirements of N.J.A.C. 5:23-3 of the Uniform Construction Code.
- (b) Enclosure constitutes construction of a permanent (that is, for the life of the building), air-tight, impact-resistant, solid structure of new construction materials which must be built around the asbestos covered pipe or structure to prevent the release of asbestos-containing materials into the area beyond the enclosure and to prevent these materials from casual contact during future maintenance operations. The enclosure shall not alter the existing fire rating and shall be flame resistant and meet the flame spread and smoke generation requirements of N.J.A.C. 5:23-3 of the Uniform Construction Code.

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- 1. The requirements of this section are set forth in order to prevent the contamination of the building environment which may be caused by improperly performed asbestos enclosure work. The following procedures shall be adhered to:
- i. Before constructing the enclosure, all electrical conduits, telephone lines, recessed lights, and pipes in the area shall be moved to ensure that the enclosure will not have to be reopened later for routine or emergency maintenance. If for any reason, lights or other equipment cannot be moved, removal of the asbestos-containing materials rather than enclosure shall be the appropriate control method to use;
- ii. Enclosure walls shall be made of tongue and groove boards, boards with spine joints, or gypsum boards having taped seams. All joints between the walls and ceiling of the enclosure shall be caulked to prevent the escape of asbestos fibers;
- iii. The underlying structure must be able to support the weight of the enclosure. Suspended ceilings with laid-in panels do not provide air-tight enclosures and shall not be used to enclose structures covered with asbestos-containing materials;
- iv. The surface of the asbestos-containing material which will be disturbed during the installation of hangers, brackets or other enclosure supports shall first be sprayed with amended water or a removal encapsulant using a low pressure airless spray:
- v. Power drills or other tools which may disturb asbestos containing material shall be equipped with or used in conjunction with HEPA vacuum filters;
- vi. Loose and hanging asbestos-containing materials shall be removed while damp and disposed of in accordance with this subchapter;
- vii. After the installation of hangers, brackets or other supports and before the asbestos-containing material is enclosed, asbestos containing materials shall be repaired, using materials which do not contain asbestos;
- viii. Enclosures for asbestos-containing materials shall be identified by signs, labels, color coding or some other mechanism to warn persons who may be required to disturb the enclosure that asbestos is present; and
 - ix. Enclosures shall be inspected at least annually to ensure their integrity.

§ 5:23-8.17 Limited containment removals

(a) The following procedures shall be followed for the use of glove bags or other techniques or work practices approved by the Department which similarly contain asbestos fibers. The glove bag work area enclosure shall be either an enclosure, built out of polyethylene sheeting around the glove bag, or the entire room if no enclosure is built.

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- (b) The preparation of the work area for glove bag removal shall include the following:
- 1. A minimum of two persons shall perform a glove bag removal project. A third person may be required to conduct air monitoring or assist with supplies.
- 2. The work area where the technique is to be utilized shall be roped off and appropriate caution and/or danger signs posted on the perimeter to prevent unauthorized personnel from entering the work area.
- 3. All necessary materials and supplies shall be brought into the work area before any removal begins.
- 4. One air change every 15 minutes shall be provided in a glovebag work area enclosure.
- 5. If no mini-enclosure is established, then the contractor shall arrange for shutting down and sealing off all electrical, heating, cooling, and ventilating or other air handling systems.
- i. If approved by the asbestos safety control monitor, the lighting and receptacles in the work area may be used if these are properly protected by ground fault circuit interruptors and can be adequately cleaned following abatement.
- (c) The following is a list of equipment and tools for the removal of asbestos by the glove bag technique:
- 1. Glove bag(s) in suitable number, size and configuration for the specific abatement project. The glove bag is an air-tight, tear-resistant enclosure, designed to enclose an object from which asbestos-containing material is to be removed, constructed of a minimum of six mil polyethylene or other suitable material with inward projecting longsleeve gloves, a tool pouch or other place where tools can be placed, and facilities for water application and a HEPA equipped vacuum attachment.
 - 2. A pump-up sprayer (garden type) with a two or three gallon capacity;
 - 3. Wetting agent: Amended water (water with a surfactant) or a removal encapsulant;
- 4. Six mil polyethylene disposal bags or leak-proof containers with the proper markings for asbestos waste;
 - 5. A HEPA filtered vacuum with a capillary tube for insertion into the glove bag;
- 6. Tools such as a small scrub brush, a utility knife for cutting the insulation, a stapler, wire cutters, smoke tubes with aspirator bulb, a bone saw or other appropriate tool, tin snips, duct tape and wettable cloths;
 - 7. A roll of six mil polyethylene; and
 - 8. An encapsulant (tinted).

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- (d) Removal procedures shall be conducted as follows:
- 1. A visual inspection of the pipe where the work will be performed shall be made to determine if any damaged pipe covering (such as broken lagging, or hanging) exists. If there is damage, then the affected portion of the pipe shall be wrapped in polyethylene and fully secured with duct tape. This procedure will prevent excessive airborne fiber concentrations from occurring during the glove bag work caused by pipe lagging hanging several feet or even several yards away which may be jarred loose by the activity. All dust and debris on the floor and other surfaces which has accumulated due to the abatement project and which contains asbestos shall be cleaned up as necessary. If the pipe is undamaged, one layer of duct tape shall be placed around the pipe at each end where the glove bag will be attached. This permits a good surface to which to seal the ends of the glove bag, and it minimizes the chance of releasing fibers when the tape at the ends of the glove bag is peeled off at the completion of the project.
- 2. Slit the top of the glovebag open (if necessary) and cut down the sides to accommodate the size of the pipe (about two inches longer than the pipe diameter).
- 3. Place the necessary tools into the pouch located inside the glove bag. This will usually include the bone saw, utility knife, rags, scrub brush, wire cutters, tin snips and pre-cut wettable cloth. Cut out a donut shape in the cloth with the inner diameter one-half-inch smaller than the diameter of the pipe beneath the insulation. The outer diameter of the donut should be three inches longer than the diameter of the pipe insulation being removed. Finally, cut a slit in each of the two donuts so they can be slipped around the pipe. A piece of cloth that can be easily bent around the surface to be cleaned may be used instead of the donut-shaped cloth.
- 4. One strip of duct tape shall be placed along the edge of the open top slit of the glovebag for reinforcement.
- 5. Place the glove bag around the section of pipe to be worked on and staple the top together through the reinforcing duct tape. Staple at intervals of approximately one inch. Next, fold the stapled top flap back and tape it down with a strip of duct tape. This should provide an adequate seal along the top. Next, duct tape the ends of the glove bag to the pipe itself, previously covered with polyethylene or duct tape (see (d)1 above). The bottom seam of the glove bag shall be sealed with high quality duct tape or equivalent to prevent any leakage from the bag that may result from a defect in the bottom seam.
- 6. Before the commencement of the abatement work, but after the glove bag is attached, the contractor shall smoke test each glove bag to ensure that it does not leak. The asbestos safety technician shall personally witness the smoke testing of each of these glove bags. Using the smoke tube and aspirator bulb or other approved smoke generating device, place the tube into the wetting agent sleeve (two-inch opening to glovebag). Fill the bag with visible smoke. Remove the smoke tube and twist the

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wetting agent sleeve to close it. While holding the wetting agent sleeve tightly, gently squeeze the glovebag and look for smoke leaking out, especially at the top and ends of the glovebag. If leaks are found, they shall be taped closed using duct tape and the bag shall be re-tested.

- i. Exception: If negative pressure is established and maintained at .02 inches w.c., smoke testing of glove bags is not required.
- 7. Insert the wand from the wetting agent sprayer through the wetting agent sleeve. Using duct tape, tape the wetting agent sleeve tightly around the wand to prevent leakage.
- 8. One person places his hands into the long-sleeved gloves while the second directs the wetting agent spray at the work.
- 9. If the section of pipe is covered with a protective jacket, this is removed first, using the wire cutters to cut any bands and the tin snips to remove the jacket. It is important to fold the sharp edges in to prevent cutting the bag when it is placed in the bottom. A box may be put in the bottom of the bag when the tools are placed in, and the metal placed in the box to further protect the bag from being cut.
- 10. With the insulation exposed, using the bone saw, cut the insulation at each end of the section to be removed. A bone saw is a serrated heavy-guage wire with ring-type handles at each end. Throughout this process, wetting agent is sprayed on the cutting area to keep dust to a minimum.
- 11. Once the ends are cut, the section of insulation should be split from end to end using the utility knife. The cut should be made along the bottom of the pipe and the wetting agent continuously supplied. Again, care should be taken when using the knife not to puncture the bag. Some insulation may have wire to be clipped as well. Again, a box may be used as in (d)9 above to protect the bag from puncture.
 - 12. Rinse all tools with wetting agent inside the bag and place back into pouch.
- 13. The insulation can now be lifted off the pipe and gently placed in the bottom of the bag, while the side of the insulation adjacent to the pipe is being thoroughly wetted.
 - 14. Using the scrub brush, rags and water, scrub and wipe down the exposed pipe.
- 15. Wet the donut-shaped pieces of wettable cloth over the exposed ends of insulation remaining on the pipe.
- 16. Remove the wetting agent wand from the wetting agent sleeve and attach the small nozzle from the HEPA-filtered vacuum. Turn on the vacuum only briefly to collapse the bag.
- 17. Remove the vacuum nozzle and twist the wetting agent sleeve closed and seal with duct tape.

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- 18. Remove all the tools and draw them out into one of the arm sleeves, twist the sleeve tightly, and seal with tape, and cut the sleeve away from the bag, cutting through the tape. In this manner, the contaminated tools may be placed directly into the next glovebag without being cleaned. Alternatively, the sleeve with the tools in it can be placed in a bucket of water, opened underwater and dried without releasing asbestos into the air. This water shall be handled as asbestos-contaminated waste. Rags and scrub brushes cannot be cleaned in this manner and should be discarded with the asbestos-contaminated waste. No more than one use of a glovebag shall be permitted.
- 19. With removed insulation in the bottom of the bag, twist the bag several times and tape it to keep the material in the bottom during removal of the glovebag from the pipe.
- 20. Slip a six mil disposal bag over the glovebag (still attached to the pipe). Remove the tape and open the top of the glovebag and fold it down into the disposal bag.
- 21. All surfaces in the work area should be cleaned using disposable cloths wetted with wetting agent. These cloths shall be disposed of or rinsed thoroughly to eliminate visible accumulation of debris. Then, when these surfaces have been allowed to dry, all surfaces shall be cleaned again using a HEPA filtered vacuum. If no mini-enclosure was built, then the entire room shall be cleaned.
 - 22. Place any contaminated articles or debris into the bag with the waste.
- 23. Twist the top of the bag closed, fold this over, and seal with duct tape. Label the bag with labels prescribed by 40 CFR Part 61, Subpart M of the USEPA, 29 CFR 1926 of OSHA and 49 CFR--Parts 100-199 of the US DOT Hazardous Waste Hauling regulations.
- 24. Asbestos-containing waste material shall be disposed of as specified in *N.J.A.C.* 5:23-8.22.
- 25. Air sampling shall be conducted after completion of glovebag projects pursuant to *N.J.A.C.* 5:23-8.21 to determine if undetected leakage occurred. Once the area has been found to be safe for re-entry by unprotected personnel, the barriers may be removed.

§ 5:23-8.18 Demolition

(a) In buildings undergoing partial demolition and in buildings to be reoccupied by persons other than workers wearing appropriate NIOSH-approved respiratory protection, all friable asbestos or asbestos-containing material that will become friable during demolition must be properly removed.

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- (b) The removal of asbestos shall require a construction permit in accordance with *N.J.A.C.* 5:23-8.5. Additionally, a demolition permit must be obtained pursuant to N.J.A.C. 5:23-2.
- (c) Asbestos abatement shall be done in accordance with all applicable provisions of this subchapter.
- (d) Air monitoring samples during the removal phase and final air samples after removal shall be required for an asbestos abatement project.

§ 5:23-8.19 Abatement in occupied buildings

- (a) The requirements of this section are intended to prevent contamination and exposure of building occupants to asbestos fibers.
- (b) The building owner shall notify building occupants in writing 20 business days prior to the commencement of an asbestos abatement project. The building owner shall outline in writing any procedures and/or precautions that are deemed necessary in order to protect the health, safety and welfare of the occupants. This notification shall include, but not be limited to: relocation plans, if any; entrances and exits that may temporarily be blocked and alternate routes to be used; the name and telephone number of the owner's representative for the occupant to call in case of an emergency or to answer any questions with regard to the project. This notification shall accompany the application for a construction permit for asbestos abatement and shall be filed with the enforcing agency.
- 1. This notification shall be posted seven days prior to the preparation of the work area, in visible locations, for the benefit of the affected occupants of the work place, and in areas immediately adjacent to the asbestos abatement project. It shall be the owner's responsibility to ensure that these postings are maintained throughout the project.
- 2. When circumstances require immediate removal of asbestos-containing material, notification shall be provided to the building occupants as soon as possible.
- 3. Nothing in this section shall be interpreted as prohibiting the building owner from providing additional notification.
- 4. The asbestos safety control monitor firm shall notify the Department in writing 10 days prior to the commencement of an abatement project in an occupied building.
- (c) A building or structure or part thereof may be occupied during an asbestos abatement project when all of the following conditions are met:
- 1. Isolation conditions include a requirement that the work area be physically separated from occupied areas by separation barriers of rigid construction consisting of nominal two inch by four inch studs spaced 16 inches on center and covered with a

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minimum of one-half inch plywood or comparable metal framing and 1/2 inch gypsum board covering. All seams shall be caulked to render the barrier air tight before two layers of polyethylene sheeting are applied on both sides. The polyethylene sheeting shall overlap at the seams. All penetrations around conduits, pipes, ducts or other openings between the work area and adjacent spaces shall be sealed, using materials determined to be suitable in accordance with the applicable subcode. In buildings required by the Uniform Construction Code to be of noncombustible construction, all materials used to construct separation barriers shall meet the Uniform Construction Code, building subcode requirements for that building and all plastics used shall be flame resistant. A separate means of egress for abatement personnel, materials and equipment shall be maintained. Adequate fire evacuation routes shall exist for all building occupants at all times.

- i. Whenever the building in which this work area is located exceeds four stories in height and when stair, elevator or similar shafts lie within or adjacent to the separation barriers or the work area, then special seals shall be installed. Such seals shall be constructed in the same manner as the separation barriers and shall create a space not less than three inches in depth in front of the entire access area which space is sealed on both sides and positively pressurized with HEPA filtered air so that the pressure in the sealed space is .05 inches w.c. greater than that in the work area or the shaft.
- ii. All HVAC systems located in the work area shall be shut down. If HVAC equipment is located in the work area and must be operated to service other areas of the building, then the HVAC equipment shall be isolated from the remainder of the work area by an enclosure constructed in a manner similar to the separation barriers and the space between the equipment and the seal shall be positively pressurized with HEPA filtered air to at least .05 inches w.c. greater than the work area.
- iii. Where return air ductwork which must be kept operating is located within the work area, then it shall be isolated from the work area by an enclosure forming an annular space around the duct which is positively pressurized with HEPA filtered air to at least .02 inches w.c. greater than the work area. The enclosure shall be constructed in a manner similar to that required for separation barriers.
- iv. All electrical systems in the work area shall be shut down. Their use may be approved by the asbestos safety control monitor if they are properly protected by ground fault circuit interruptors, they are cleanable, and provided that such other precautions as may be necessary are taken to ensure the safety of all who are in the work area.
 - 2. Engineering controls shall be implemented as follows:
- i. The asbestos safety technician shall verify exhaust capacity through appropriate field measurement and record these results in writing. The verification of exhaust flow rate via use of devices for monitoring pressure drop across filters on air filtration devices shall not be a substitute for appropriate field measurement. All exhaust from the work

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area shall be directed to the exterior of the building. If exhaust to the exterior of the building is not feasible, exhaust from the work area shall be directed into a second set of in-line air filtration devices, which, then, shall be permitted to be discharged into designated spaces approved by the asbestos safety control monitor.

- ii. The contractor shall install a sufficient number of HEPA filter equipped air filtration units to cause a complete air change or total air filtration within the work area at least once every 15 minutes. (Nothing in this subchapter shall be construed to limit the maximum exhaust capacity from the work area or to prohibit additional air changes per hour.) The exhaust capacity from the work area shall be sufficient to establish a pressure differential between the work area and all adjacent spaces greater than or equal to 0.05 inches w.c. (Nothing in this subchapter shall be construed to limit the maximum pressure differential established between the work area and occupied spaces.)
- (1) Make up air shall not be drawn through openings in the separation barriers in buildings greater than four stories in height, unless those openings are equipped with systems or devices which will not permit air flow except toward the work area and the air filtration and exhaust units located in the work area.
 - 3. Work area protection shall be assured as follows:
- i. Floors shall be covered with two layers of polyethylene sheeting which shall overlap at the seams and which shall be applied to the floor, individually sealed. The first layer shall extend up the wall at least 12 inches. The second floor layer shall be installed and extend up sidewalls at least 24 inches.
- ii. Walls shall be covered with one layer of polyethylene sheeting individually sealed to the wall. The layer shall hang straight down overlapping the second layer of floor sheeting on the wall by at least 18 inches.
- iii. Sheeting shall be sized to minimize the number of seams. No seams shall be located at the joints between walls and floors. As a minimum, no seam shall stop within 12 inches of a corner and sheeting shall overlap at least 12 inches between seams of adjacent layers.
- iv. When a strippable coating is used in place of polyethylene sheeting, it shall be used in accordance with *N.J.A.C. 5:23-8.15(f)*7 and the product shall be applied during periods of minimal occupancy as determined by the owner and included in the approved plan.
 - 4. Monitoring shall be conducted as follows:
 - i. Air sampling shall be done as follows:
- (1) At a minimum, one sample at the beginning of each work shift, one every four hours thereafter, and one at the end of the contractor's work day for every 10,000 square feet of occupied space adjacent to the work area shall be collected and analyzed. Air

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samples shall be taken in areas where the greatest potential for fiber migration exists. In addition to the requirements noted above, air samples shall be taken at the entrance(s) to the work area and any other interior spaces from which make-up air is drawn. Additional samples shall be taken for all areas such as stairwells, communicating shafts, elevators, plenums, ducts which pass through the work area and which are in service, and unusual room and building configurations. If air levels exceed the permitted fiber count, the applicable requirements of the contingency plan in (c)5 below shall be followed.

- (A) At least one air sample shall be collected and analyzed during the work shift inside the work area. The results of this test will not, however, trigger the requirements of the contingency plan.
- (2) A secure chain of custody for air samples shall be established in writing as part of the approved plan by the asbestos safety control monitor firm. The final disposition of samples (whether they should be retained or disposed of after analysis and if retained, who keeps them) shall be determined prior to the commencement of asbestos abatement.
- (3) The services of a testing laboratory, as delineated in *N.J.A.C.* 5:23-8.21(a)1 and 2, shall include a microscope and laboratory technician at the project site or the capacity to obtain results within four hours from start of sample. The laboratory technician shall be listed in the Asbestos Analyst Registry of the American Industrial Hygiene Association for PCM analysis or qualified by other programs recognized by the Department as equivalent. If the laboratory technician is on site, the owner shall provide a safe and clean space for the analysis of samples separate and distinct from the work area. Air samples are to be analyzed via NIOSH 7400 and verbal results made available for a determination regarding continued occupancy. A written record of test results shall be kept at the job site and included in the final report.
- (4) Ten percent of all abatement samples shall be re-analyzed within 24 hours at a laboratory for quality control purposes.
- (5) Daily occupancy shall be allowed when the results of all the air samples are less than or equal to 0.010 fibers/cc by Phase Contrast Microscopy. If air levels exceed 0.010 fibers/cc, the contingency plan during abatement in (c)5 below shall be followed.
- (6) In the case of reoccupancy and final clearance, all air samples used to determine reentry shall be analyzed by an accredited laboratory.
 - ii. Pressure monitoring shall be carried out as follows:
- (1) Pressure differential shall be monitored by digital manometers with continuous printout or other approved low pressure monitoring devices. Sensor tubes used for monitoring shall be placed so that the air filtration devices shall not cause false readings.

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The asbestos safety technician shall zero and level the gauges each time a reading is taken.

- (2) One or more separate pressure monitoring systems shall be installed by the asbestos safety control monitor firm near the entrance(s) to the work area and between the work area and any interior spaces from which make-up air is drawn.
- (3) Written documentation of pressure differential shall be provided by the asbestos safety technician either by continuous printout devices. The asbestos safety technician and the contractor supervisor will ensure, prior to the completion of the work shift, the integrity of the containment site before workers depart.
- (4) The pressure differential shall be greater than or equal to 0.05 inches w.c. at the pre-commencement inspection (at the time of approval immediately prior to the start of abatement work).
- (A) In addition to providing a pressure differential greater than or equal to 0.05 inches w.c. for the pre-commencement inspection, a smoke test shall be conducted to demonstrate that the work area has been isolated properly and that the pressure differentials have been established to prevent fiber migration from the work area.
- (5) Daily Occupancy shall be allowed when the pressure differential is equal to or exceeds 0.05 inches w.c. If the air pressure differential drops below 0.05 inches w.c., the contingency plan during abatement in (c)5 below shall be followed.
- 5. Contingency plan during abatement shall be implemented as described below. These are the minimum requirements which shall be enforced by asbestos safety control monitors. These requirements shall not limit the asbestos safety control monitors from instituting additional requirements, if necessary, for the protection of the building occupants.
- i. If the pressure differential drops below 0.05 inches w.c., the following procedures shall be implemented:
- (1) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the pressure loss.
- (2) The contractor shall institute corrective action such as: additional sealing, critical barrier maintenance and construction, changing of exhaust unit filters, adjustment of make-up air, operation of additional exhaust units or other necessary measures to reestablish an acceptable pressure differential.
- ii. If the pressure differential drops below 0.01 inches w.c., the following procedures shall be implemented:
 - (1) The contractor shall cease abatement activity in the work area.

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- (2) The asbestos safety control monitor shall notify the building owner to evacuate the pressurized space(s). The pressurized space(s) shall include all space outside the work area which is pressurized to maintain the required pressure differential relative to the work area and is isolated from the rest of the building in terms of air flow. The pressurized space may include the entire building exclusive of the work area or any part of the building that is pressurized to isolate it from the work area.
- (3) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls and determine the source of the pressure loss.
- (4) The contractor shall institute corrective action such as: additional sealing, critical barrier maintenance and construction, changing of exhaust unit filters, adjustment of make-up air, operation of additional exhaust units or other necessary measures to reestablish an acceptable pressure differential.
- (5) Reoccupancy shall not be permitted in any area unless a pressure differential of 0.05 inches w.c. or greater is reestablished.
- (6) If a pressure differential of 0.05 inches w.c. or greater is not reestablished within 24 hours of the first reading below 0.01 inches w.c., then the building shall be evacuated.
 - iii. If air levels exceed 0.010 f/cc, the following procedures shall be implemented:
- (1) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the high air level.
- (2) An additional/second PCM air sample shall be taken at each place at which a high air level was obtained. The additional/second PCM sample may be split, and if the result of the air sample is less than or equal to 0.010 f/cc the contingency plan is terminated. If the result of the air sample exceeds 0.010 f/cc, the contractor, in consultation with the asbestos safety control monitor, shall choose the option of cleaning and retesting by PCM analysis or analyzing the split sample by TEM analysis. If the result of the TEM analysis exceeds 0.010 f/cc, then cleaning shall be undertaken.
- (3) The decision as to the timing of the cleaning activity shall be made by the asbestos safety control monitor firm in consultation with the building owner and the contractor.
- (4) Cleaning shall include, but not be limited to, wet wiping and misting the air. Cleaning the affected area shall be continued outside of containment and PCM sampling shall also be continued until the result in the area is equal to or less than 0.010 f/cc by either PCM or TEM analysis.
- (5) If laboratory analysis of air samples does not yield a reading less than or equal to 0.010 f/cc within 24 hours of receipt of the first test result above 0.010 f/cc, then the building shall be evacuated.

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- (6) Reoccupancy shall not be permitted in any area where PCM analysis reveals results greater than 0.010 f/cc, unless TEM results indicate asbestos fibers are equal to or less than 0.010 f/cc. In the case of reoccupancy, all air samples used to make the determination to allow reentry shall be analyzed by an accredited laboratory.
- iv. If a power outage occurs during active abatement work, the building occupants shall be evacuated until the air samples determine that the occupied spaces are safe, and power has been restored. If a power outage occurs when the building is unoccupied, occupancy will not be permitted until air samples determine that the spaces to be occupied are safe and power has been restored.
 - 6. Security shall be required as follows:
- i. In high risk areas, the owner shall provide a 24 hour security guard to ensure protection against damage or vandalism to separation barriers, engineering systems, monitoring devices, or other equipment.
- ii. The owner shall provide continuous unlimited access for the asbestos safety technician in all occupied spaces for installation, maintenance, and data collection from monitoring systems.
- iii. The asbestos safety control monitor firm shall include provisions in the plan and the asbestos safety technician shall ensure that filters are changed as necessary and that pressure differential is maintained around the clock until the project is completed.
 - 7. Waste removal shall be accomplished as follows:
- i. The waste removal route of travel is to be designated on the abatement plans and shall be separate and distinct from the normal route of travel used by building occupants. Waste removal shall occur during the time of least amount of building occupancy. If the route of travel is to be used the following day by building occupants, air monitoring must be performed, and if the results of air levels exceed 0.010 f/cc, then the waste removal route is to be wet wiped using amended water, HEPA vacuumed and retested until an acceptable air level is achieved prior to allowing occupancy of the area.
- ii. The waste removal process shall be closely monitored visually and through air sampling by the asbestos safety technician.
- iii. No dumpster shall remain on the premises overnight unless the dumpster is locked and labeled to indicate that it contains asbestos-contaminated waste.
- 8. A written statement shall be signed by the asbestos safety control monitor denoting that an asbestos abatement will occur during building occupancy and verifying that the above requirements will be maintained. This written statement shall accompany the application for a construction permit for asbestos abatement and shall be filed with the enforcing agency. This statement shall include the areas to be occupied during the abatement and the number of occupants.

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§ 5:23-8.20 Removal of non-friable asbestos-containing material

- (a) This section applies to all non-friable, miscellaneous asbestos-containing material.
- 1. When the removal method will cause the building environment to become contaminated with airborne asbestos fibers caused by a combination of mechanical and manual tasks, such as grinding the surface of vinyl asbestos floor tiles, then complete separation of the worksite from the rest of the building shall be required and the precautions and procedures as delineated in *N.J.A.C.* 5:23-8.15 or 8.19, as appropriate, shall be followed. A construction permit for asbestos abatement pursuant to this subchapter shall be required.
- 2. When the removal method will not contaminate the building environment with airborne asbestos fibers, such as when an electric heating appliance is used to loosen vinyl asbestos floor tiles or when the "Recommended Work Practices for the Removal of Resilient Floor Coverings" (latest edition) by the Resilient Floor Covering Institute are followed in removing floor tile, sheet vinyl flooring and the associated adhesives, then general isolation of the work area from the surrounding environment by the closing of doors and windows in the removal areas, when feasible, safe work practices and proper clean-up procedures shall be required.
- (b) The disposal of non-friable asbestos-containing material and/or asbestos-contaminated waste shall conform to the New Jersey Department of Environmental Protection and Energy requirements specified in *N.J.A.C.* 7:26.
- (c) Exception: This section shall not apply to non-friable asbestos-containing material found on the exterior of the building such as asbestos siding, transite and asbestos cement board, asbestos roof shingle, felts and build up roofing materials. Safe work practices shall be employed to minimize asbestos fiber exposure during the tear-off period. A construction permit shall be obtained if required pursuant to N.J.A.C. 5:23-2. Disposal of this waste shall be in accordance with regulations for the disposal of such material adopted by the New Jersey Department of Environmental Protection and Energy.

§ 5:23-8.21 Air monitoring methodology

(a) Air sampling specified in this section shall be performed by the asbestos safety technician in accordance with the procedures specified in this subchapter and shall be analyzed by a laboratory pursuant to 40 CFR 763.90.

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- 1. For phase contrast microscopy (PCM) analysis, laboratories shall be currently enrolled in the American Industrial Hygiene Association Proficiency Analytical Testing Program or an equivalent recognized program.
- 2. Analysis by PCM shall use the NIOSH 7400 method delineated in "Fibers" publication in the NIOSH Manual of Analytical Methods, 3rd edition, 2nd supplement, August 1987 or the latest edition. Maximum turnaround time from sample collection through data reporting shall be 24 hours.
- 3. For transmission electron microscopy (TEM) analysis, laboratories shall participate in the National Institute of Standards and Technology--National Voluntary Laboratory Accreditation Program (NIST-NVLAP) and shall certify that the analysis they performed was according to the protocol listed in Appendix A to Subpart E of 40 CFR 763. Maximum turnaround time from sample collection through data reporting shall be 72 hours.
- 4. All pumps shall be calibrated prior to initial sampling using a primary standard. Pumps shall be re-calibrated with a minimum of a secondary standard before and after each sample is collected. Protocols shall be established for periodic calibration, using a primary standard. The frequency of primary recalibration checks shall be initially high, until experience is accumulated to show that it can be reduced while maintaining the required sampling accuracy. Records shall be kept of all calibrations and shall be part of the daily log.
- (b) Air sampling while abatement is in progress shall comply with the following procedures:
- 1. A minimum of three samples per eight hour shift shall be collected (one at the beginning of each shift, one every four hours thereafter, and one at the end of the contractor's work day). One stationary sample shall be collected within the clean room of the decontamination unit and two samples collected adjacent to the work area but remote from the decontamination unit entrance. In the selection of adjacent areas to be monitored, preference shall be given to rooms adjacent to critical barriers and/or work area. Testing results shall not indicate that concentrations above 0.01 fibers per cubic centimeter have occurred outside the containment barrier or above 0.02 fibers per cubic centimeter within the clean room of the decontamination chamber during the abatement project.
- 2. For abatement projects in occupied buildings, additional samples shall be taken in spaces adjacent to the work area and inside the work area and analyzed by PCM as required by *N.J.A.C.* 5:23-8.19(c)4. The contingency plan in *N.J.A.C.* 5:23-8.19(c)5 shall be followed if test results indicate that this is necessary.
- (c) Post abatement visual inspections and air monitoring shall comply with the following procedures:

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- 1. Within 48 hours after clean-up for post-removal air testing, and before the removal of critical barriers, a thorough and complete visual inspection and a subsequent final air test shall be performed. This test is required to establish safe conditions for the removal of critical barriers and to permit the beginning of reconstruction activity, if required. Sufficient time following clean-up activities shall be allowed so that all surfaces shall be dry during monitoring. Air pressure differential filtration units shall be in use during this monitoring. Post removal testing shall begin when all work area surfaces are completely dry.
- 2. Aggressive air sampling shall be employed using propeller-type fans and leaf blowers as follows:
- i. The fans shall be placed in each room to be sampled so as to cause settled fibers to rise and enter the air.
- ii. Prior to air monitoring, floors, ceilings, and walls shall be swept with the exhaust of a one-horsepower leaf blower. The areas which would be subject to dead-air conditions shall be swept clean.
- iii. The fans used shall be capable of creating a minimum air velocity of 500 feet per minute. These fans may be of the oscillating type.
- iv. The sampling pump and sampling media shall be placed in the abatement area on a random basis to provide unbiased and representative samples. Stationary fans shall be placed in locations which will not interfere with air monitoring equipment. Fan air shall be directed toward the ceiling.
 - v. One fan shall be used for each 10,000 cubic feet of the work area.
- vi. The leaf blower and its use must meet the criteria set forth in EPA document 560/5-85-024, "Guidance for Controlling Asbestos-Containing Materials in Buildings," appendix section M.1.5, or any replacement criteria set forth by the EPA. Their use should be restricted to general occupancy areas that are contained, and they should not be used in any space with an open dirt, sand or gravel floor.
- vii. The work site shall be kept free of non-asbestos abatement debris that would render aggressive air sampling impractical.
- (d) Post abatement sampling and analysis for an asbestos hazard abatement project shall be performed as per EPA 40 CFR 763.90i. Samples collected within the affected work area shall be analyzed by TEM.
- (e) Post abatement sampling and analysis for an asbestos hazard abatement project utilizing the glovebag technique and encapsulation shall be as follows:
- 1. One sample per 10,000 square feet of work area with a minimum of five samples shall be required. Samples collected within the affected work area may be analyzed by

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PCM to confirm completion of an asbestos abatement project using the methodology specified in NIOSH 7400.

- (f) For TEM analysis, the project shall be considered complete when the results of samples collected in the affected work area comply with 40 CFR 763.90 and Appendix A to Subpart E. Maximum turnaround time from sample collection through data reporting shall be 72 hours.
- (g) For PCM analysis, the project shall be considered complete when the results of samples collected in the affected work area show that the concentration of fibers for each of the five samples is less than or equal to 0.01 fibers per cubic centimeter.
- (h) When the air analysis results for projects covered by this subchapter show asbestos fiber concentrations above the acceptance criteria, then clean-up shall be repeated until compliance is achieved by re-cleaning all surfaces using wet methods and operating all HEPA equipped air pressure differential units to filter the air.

§ 5:23-8.22 Disposal of asbestos waste

(a) The disposal of friable/non-friable asbestos-containing material and asbestos-contaminated waste from the project site shall be in accordance with New Jersey Department of Environmental Protection and Energy requirements specified in *N.J.A.C.* 7:26 and 40 CFR Part 61, Subpart M.